

Technical Note

To: Mira Esposito

From: Michael Christie (PDL)

17th August 2021 Date:

24412 St John's Wood – 77 Avenue Road Project:

Piling: Basement Impact Assessment Review

At the request of MIRA A Architecture & Engineering on behalf of the owner of 77 Avenue Road, a Basement Impact Assessment (BIA) Review has been carried out at 77 Avenue, London, NW8 6JD in support of a revised planning application for a proposed new development which includes two levels of basement.

The purpose of this review is to compare the proposed revisions to the development scheme with the scheme considered in the existing BIA and to assess whether it meets the requirements of the current policy criteria of the London Borough of Camden in respect to basement development.

Consented Application – 2019/1747/P

The previous planning application (planning reference 2019/1747/P) has been granted consent, which includes for two levels of basement with a basement formation level of 5.95m below ground level (bgl). However, it should be noted that the BIA submitted with the application considered a scheme with formation levels to 7.95m bgl.

The following reference material was submitted to LBC in support of the application, which has been reviewed, and forms the baseline of this assessment:

- Basement Impact Assessment and Structural Impact Assessment (ref 1678) dated April 2018 by Constructure Structural Designers.
- Basement Impact Assessment (ref BIA/9815) dated March 2018 by Chelmer Global Ltd including:
- Factual Report (ref FACT/8562) dated 23 February 2017 by Chelmer Site Investigation Laboratories
- Existing and Proposed Plans, Elevations and Section drawings (ref 1716) dated March and April 2018 by Wolff Architects.
- SuDSmart Pro Report (ref 64958R1REV4) dated June 2018 by GeoSmart Information Ltd.
- Design & Access Statement (ref 1716-PL2-DAS Revision 0) dated April 2018 by Wolff
- Architects.
- Arboricultural Assessment and Method Statement (ref 16377-AA2-AS) dated 14 June 2018 by Barrell Tree Consultancy.



- Structural Method Statement Rev A (ref 1679) dated August 2019 by Constructure Structural Designers.
- Basement Impact Assessment (ref J19197) dated August 2019 by GEA Ltd.

LBC instructed their independent BIA Auditor, Campbell Reith, to audit the BIA, who agreed that the BIA met the requirements of Camden Planning Guidance (CPG) Basements. The following audit report has been reviewed as part of this assessment:

 Basement Impact Assessment Audit (ref: 12985-56, Revision F1) dated October 2019 by Campbell Reith.

Basis of Review

This review has been undertaken with consideration of the following LBC planning guidance:

- CPG Basements (2021).
- The Local Plan (2017): Policy A5 (Basements).

Author Qualifications

This review has been carried out by the following professionals in accordance with the requirements of CPG Basements:

- Corrado Candian, CEng MICE
- Philip Lewis, CGeol FGS

Proposed Revisions to the Development

The proposed revisions to the scheme assessed in the BIA are:

- A change in footprint of the proposed basements at the rear of the property, with the basements extending up to approximately 8m beyond the consented scheme. The consented scheme extended further to the rear along the northern boundary than along the southern boundary; the proposed scheme 'squares off' the rear boundary, so there is no extension along the northern boundary with the maximum extension at the southern boundary.
- The deepening of the plant room situated at the north-eastern corner of the house, bringing the formation level down to match the second basement formation level across the rest of the footprint.
- There is no change to the proposed construction methodology for the basement works, with the majority of retaining walls formed by contiguous piling, with one section of wall formed by underpinning (already completed, under the Party Wall Award with 73 75 Avenue Road).



The revisions are illustrated on the following drawings, which are appended for reference:

• Planning Application Amendments, April / August 2021 by KSR Architects and Interior Designers in conjunction with MIRA A Architecture & Engineering.

For clarity, whilst the consented scheme drawings indicate the basement formation level at 5.95m bgl, the BIA assessed a basement scheme with a formation level of 7.95m bgl. Therefore, although the current drawings indicate a revised basement formation level in excess of the consented scheme depth, the proposed formation level is the same as or shallower than the 7.95m assessed in the BIA.

Review of the BIA and Applicability to the Proposed Revisions

The majority of the scheme considered within the BIA will be built without any further changes; only the proposals along the rear façade of the basement require further consideration:

- The proposed revisions will not impact the hydrological environment; the scheme will implement
 attenuation SUDS in accordance with the current BIA. The final drainage scheme and off-site
 discharge rates to public sewers should be discussed with and approved by Thames Water and
 LBC.
- The proposed revisions will not impact the hydrogeological environment; the bulk of the basement is formed within the very low permeability London Clay Formation which is designated as Unproductive Strata and incapable of supporting significant groundwater flow.
- The proposed revisions will not impact upon land stability or increase the likelihood or magnitude of damage to neighbouring structures:
 - o The proposed main revision occurs well beyond the building lines of the immediate neighbours, 73-75 Avenue Road and 79 Avenue Road.
 - o The ground movement assessment (GMA) included within the BIA includes contour plots of predicted movements in relation to the neighbouring structures, which illustrate that the proposed lateral extension to the rear façade of the basement would not generate additional movements that would impact the neighbouring structures.
 - The proposed deepening of the plant room in the north-eastern corner is in accordance with the formation level already considered in the BIA and the GMA.
 - o Its further noted that 73-75 Avenue Road has a double level basement and 79 Avenue Road has a consented planning application for development including a basement and an ongoing application (2021/3362/P) for redevelopment including a basement. The GMA considers the movements at ground level; where basements and deep foundations are present in neighbouring structures, the impacts from ground



movements are further mitigated. Therefore the GMA is considered to be reasonably conservative.

Summary

The BIA documents are considered pertinent to the scheme, including the proposed revisions.

The proposed revisions to the scheme will not adversely impact the surrounding structures and environment beyond the levels currently predicted, which are within and in accordance with the LBC policy criteria.

Should any further revisions occur, including the proposed construction methodology and dig levels, the scheme should be further assessed and any additional impacts mitigated as required, in accordance with CPG Basements.

Conclusions

Based on our knowledge and expertise we confirm that the following approved documents with Consent Ref. 2019/1747/P are still valid to be referred to and will not require a new BIA assessment.

Our study is based on the consented documents and drawings noted above, and included again for reference;

- Basement Impact Assessment and Structural Impact Assessment (ref 1678) dated April 2018 by Constructure Structural Designers.
- Basement Impact Assessment (ref BIA/9815) dated March 2018 by Chelmer Global Ltd including:
- Factual Report (ref FACT/8562) dated 23 February 2017 by Chelmer Site Investigation Laboratories Ltd.
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- Basement Impact Assessment (ref J19197) dated August 2019 by GEA Ltd.

Do not hesitate to contact the undersigned if you require additional information.

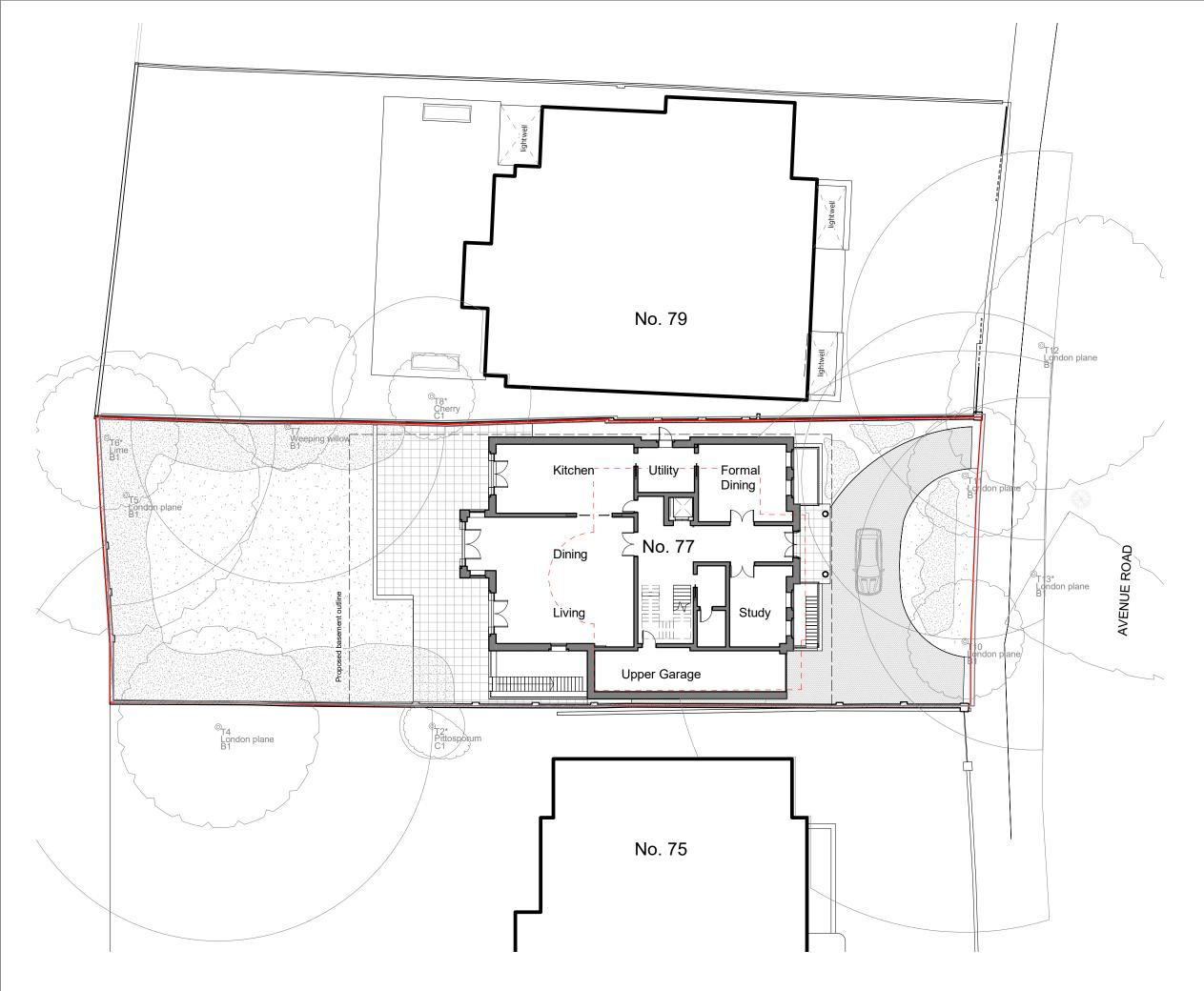
Regards

Michael Christie

Senior Design Engineer DD: 01494 216337



Appendix A Associated Drawings



Proposed site plan
1: 250

KEY

Assumed boundary line

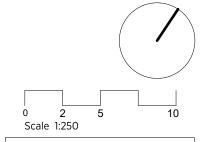
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approximate only.

----- Existing footprint



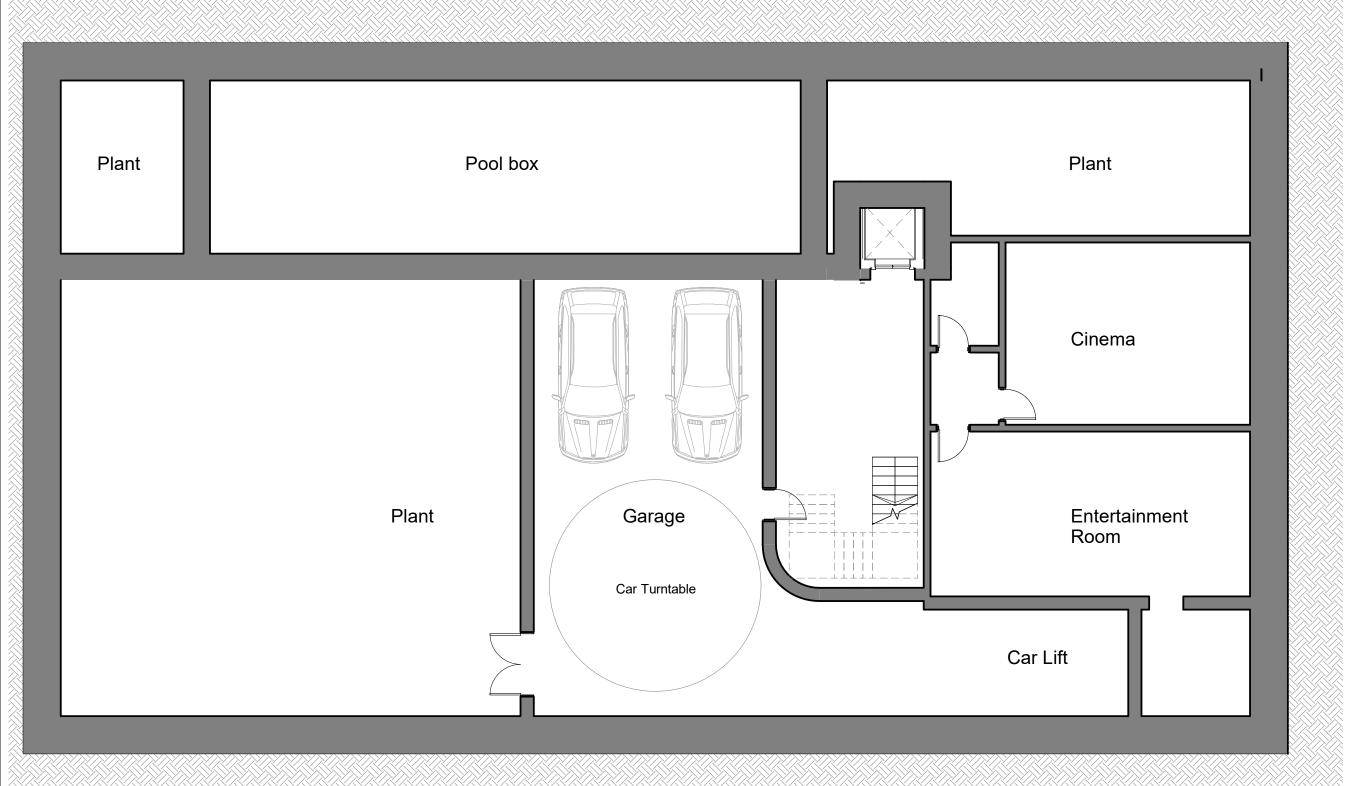
PLANNING



77 Avenue Road

Proposed site plan

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Project Ref:	Drawing No:	Revision:
21002	P002	

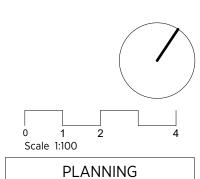




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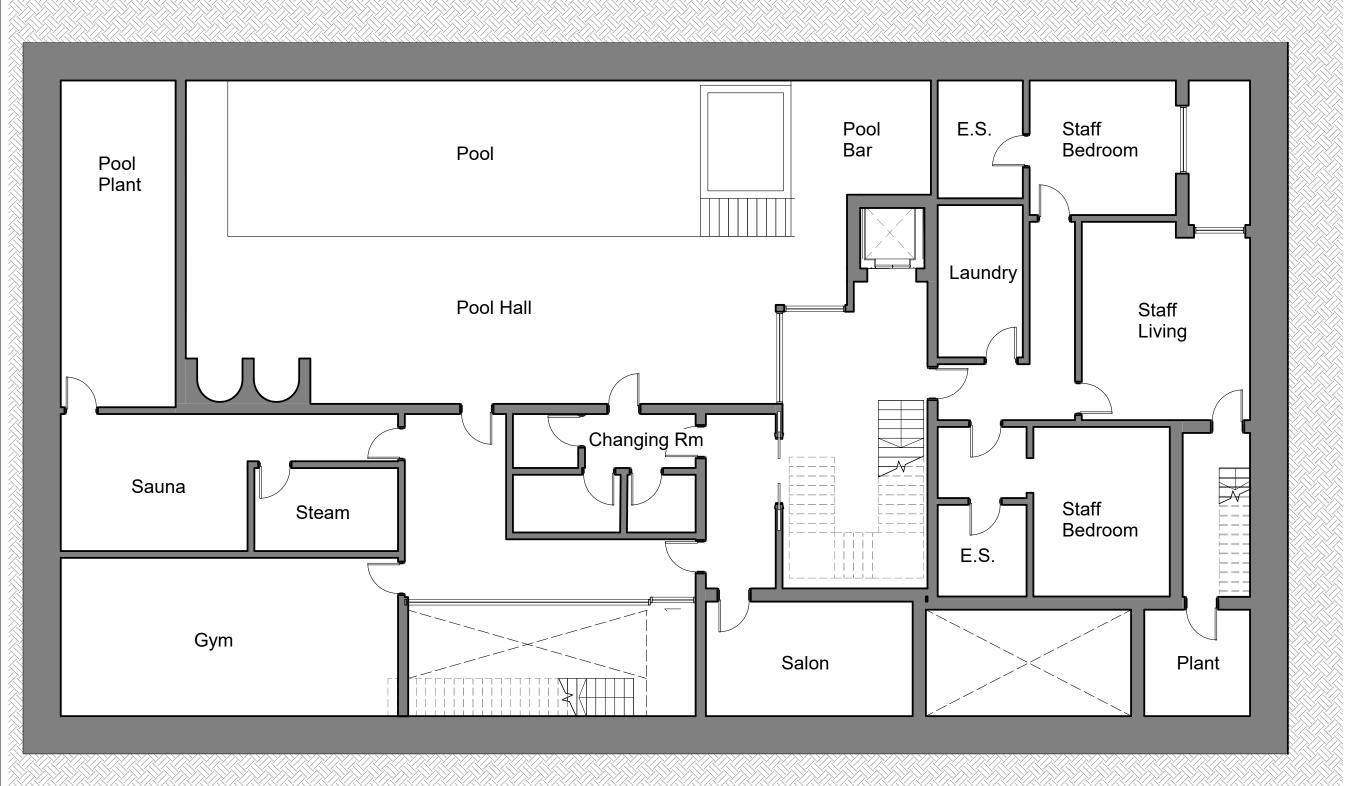




77 Avenue Road

Basement Plan

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Project Ref:	Drawing No:	Revision:	
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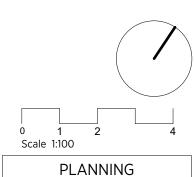
Proposed Basement

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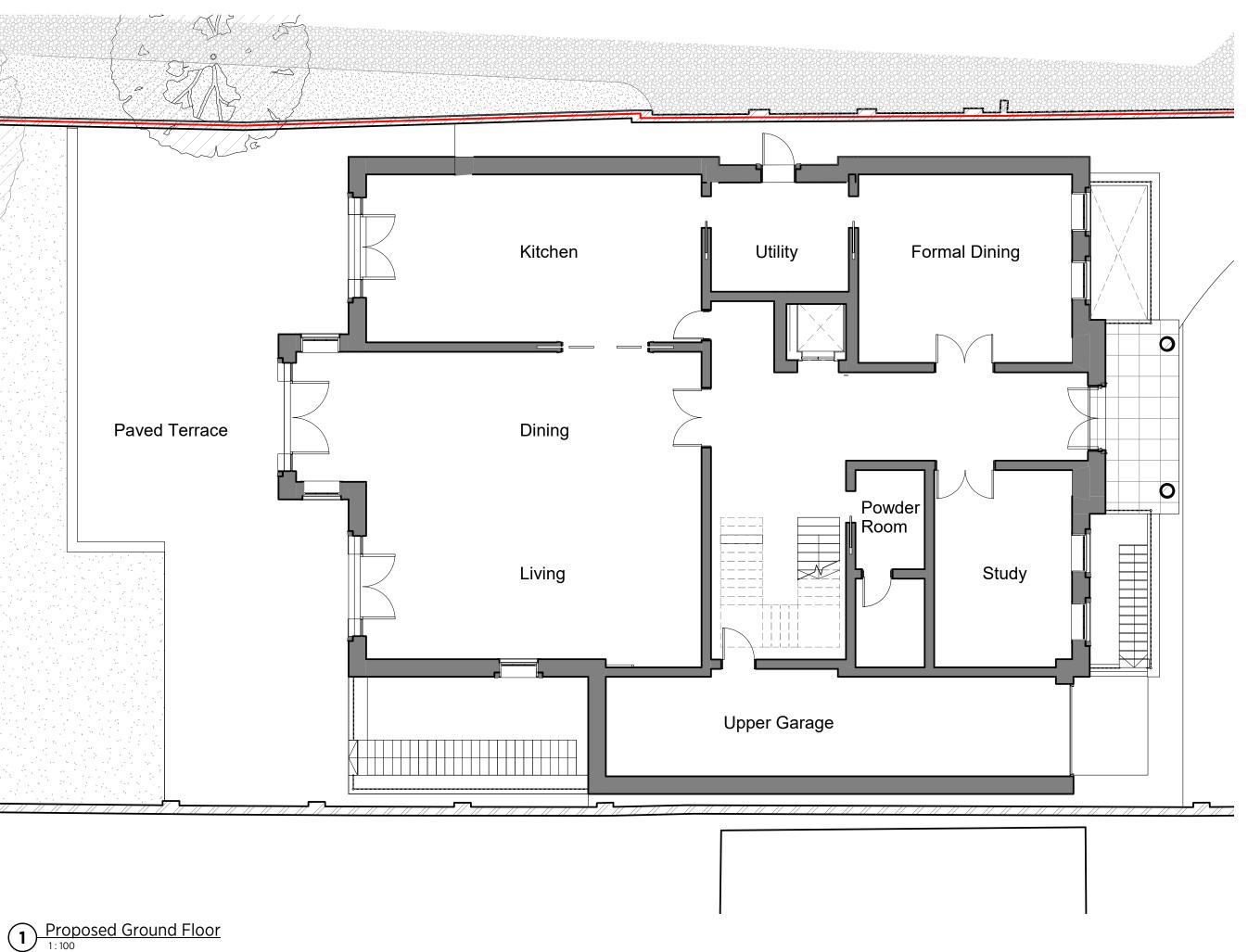




77 Avenue Road

Proposed Lower Ground Floor Plan

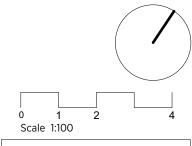
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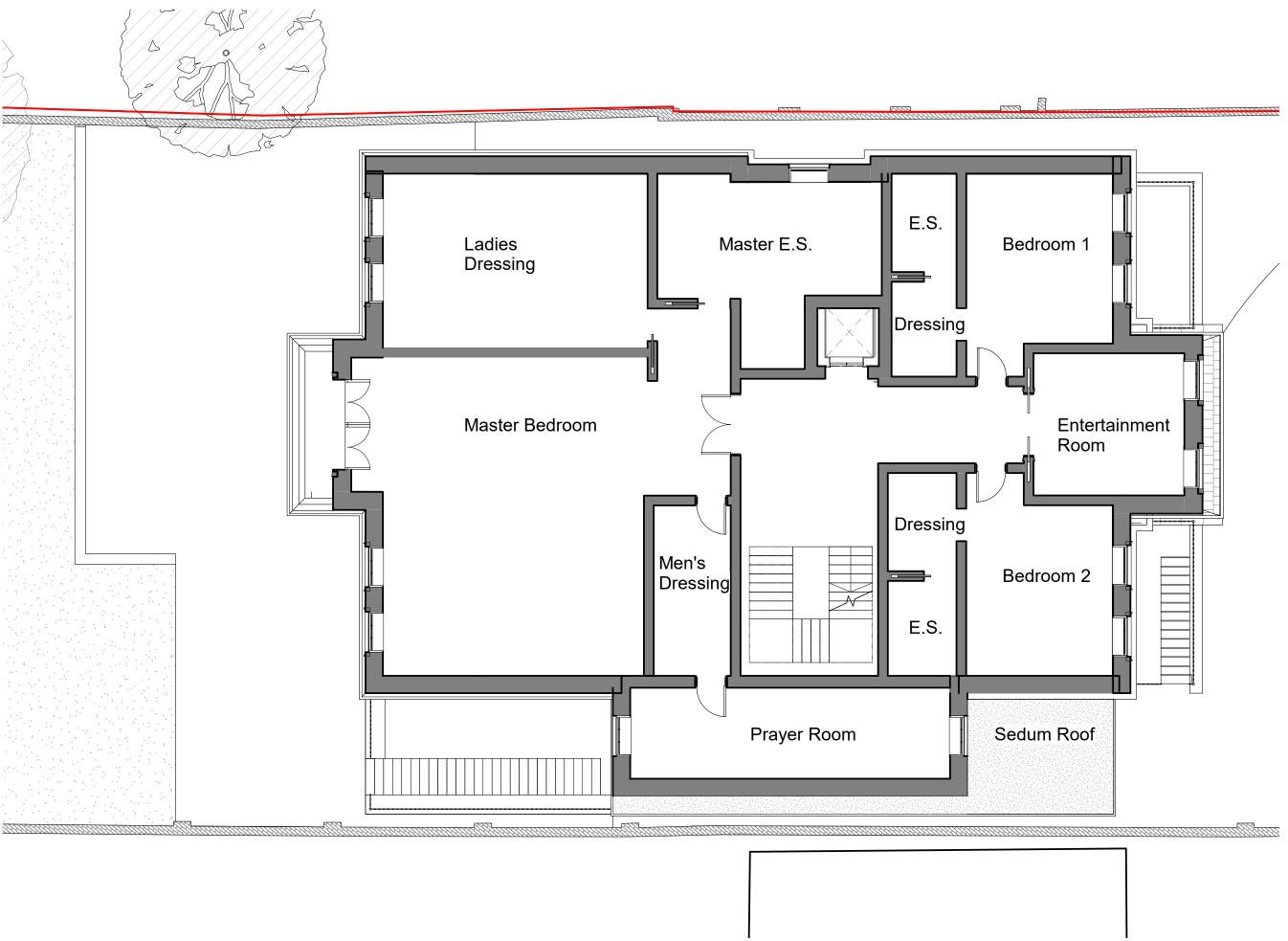
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KSR ARCHITECTS & INTERIOR DESIGNERS

77 Avenue Road

Proposed Ground Floor

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21002	P100	



Proposed First Floor
1:100

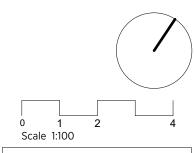
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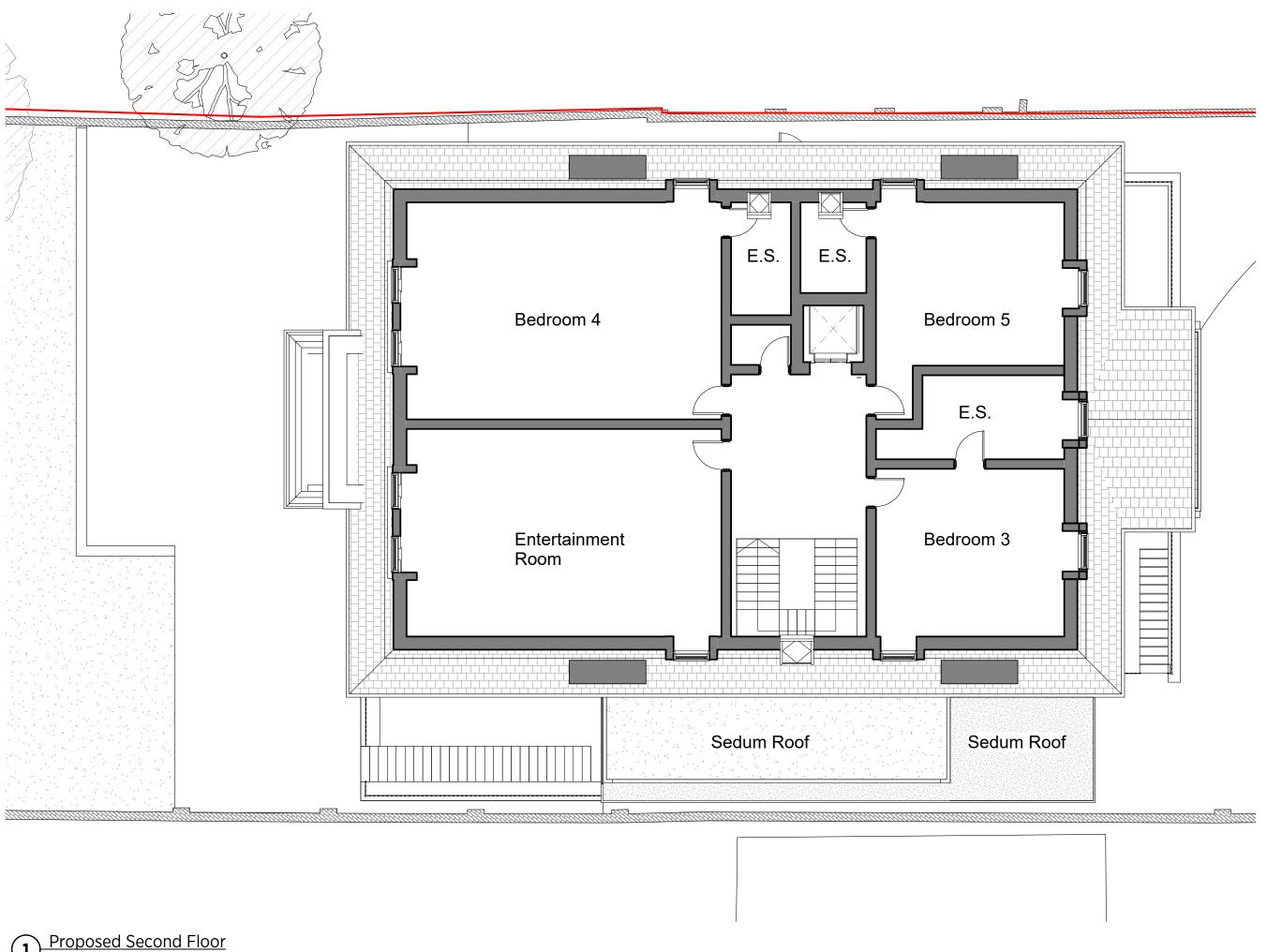


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77 Avenue Road

Proposed First Floor Plan

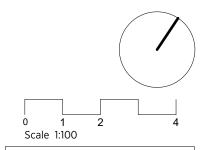
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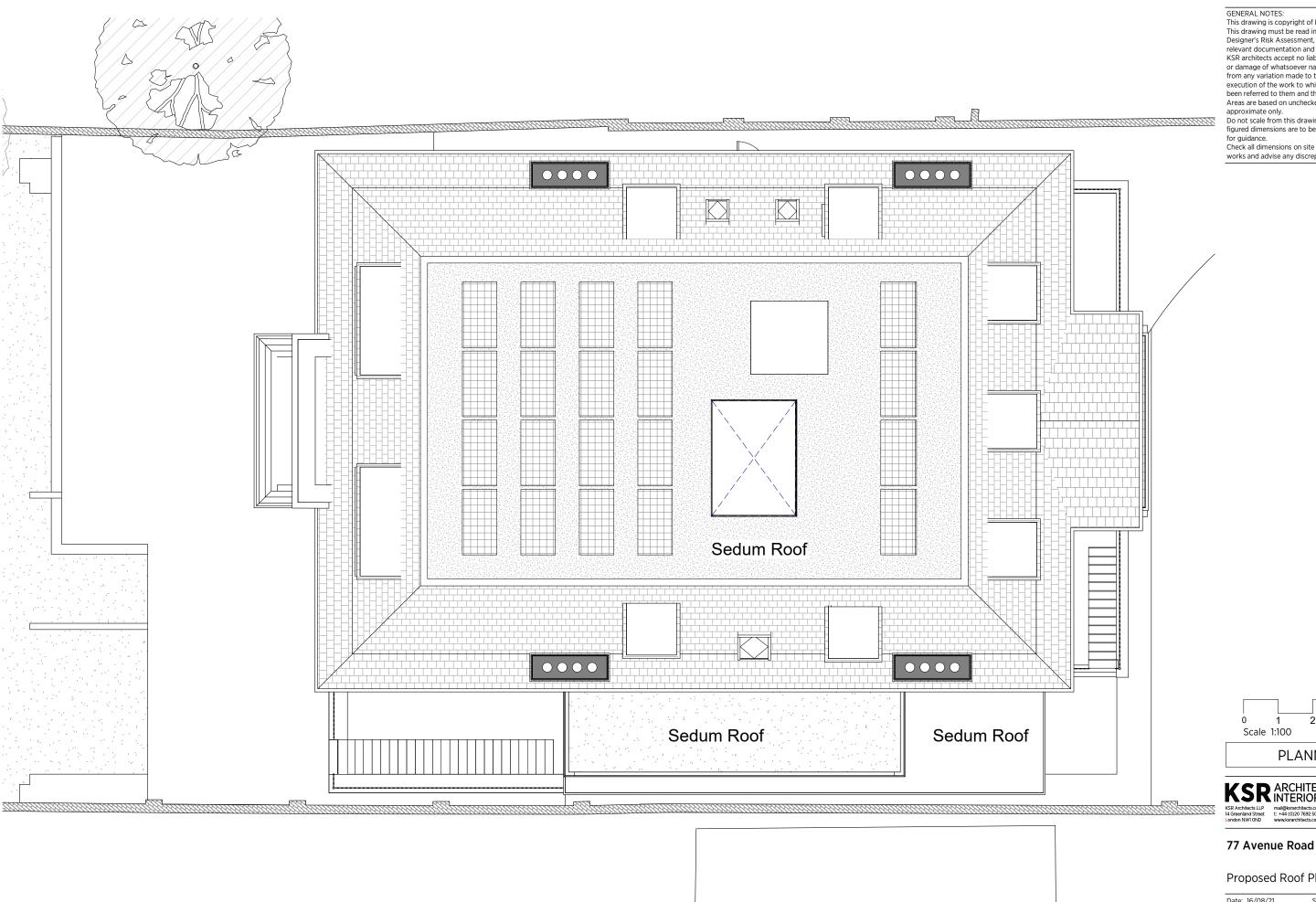


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Proposed Second Floor

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Proposed Roof Plan
1:100

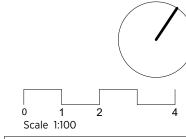
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Proposed Roof Plan

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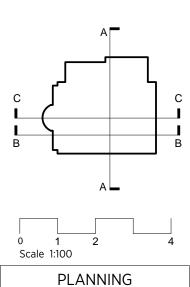




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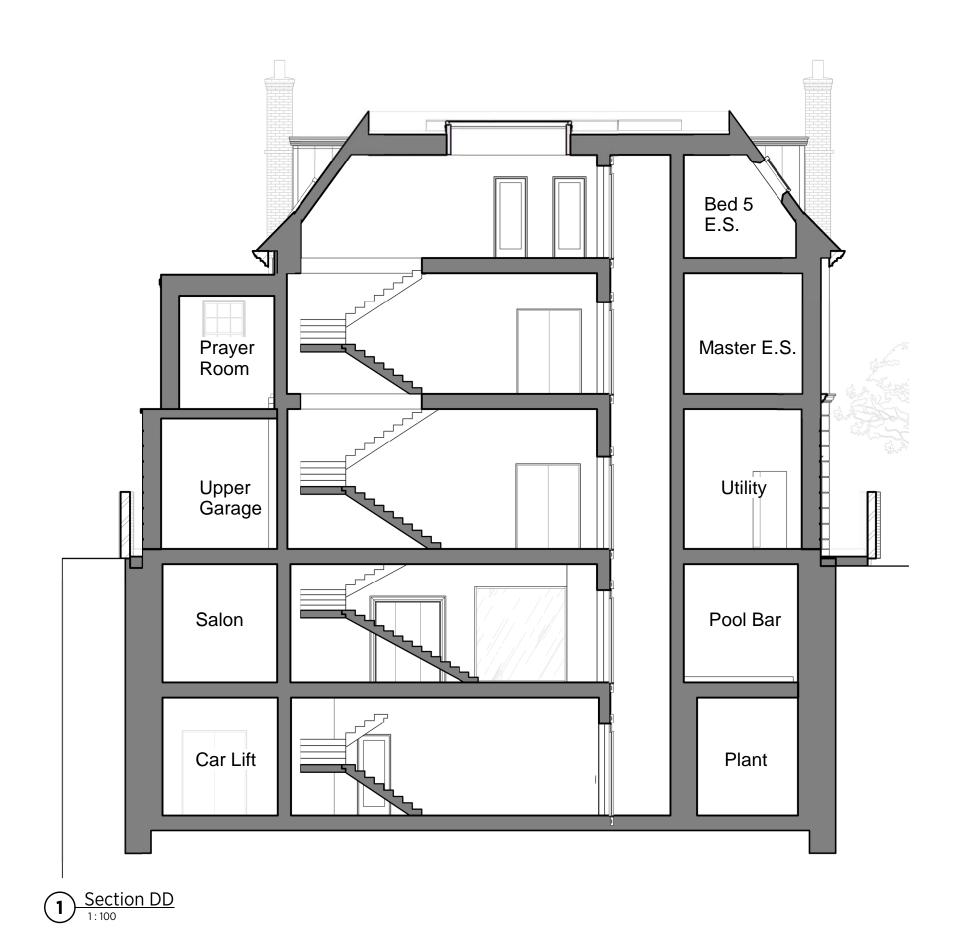
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77 Avenue Road

Proposed Section AA

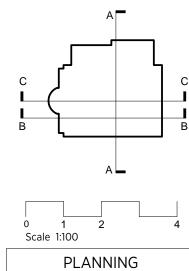
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Proposed Section BB

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Front Elevation
1:100

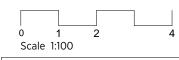
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77 Avenue Road

Proposed Front Elevation

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21002	P300	



Rear elevation

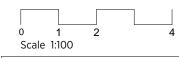
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Proposed Rear Elevation

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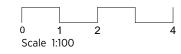
South Side Elevation
1:100

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77 Avenue Road

Proposed Side-South Elevation

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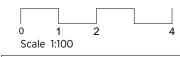
North Side Elevation
1:100

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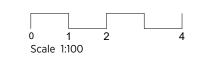
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Proposed Side-North Elevation

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1 Street Elevation
1: 200



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77 Avenue Road

Proposed Street Elevation

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Appendix B Piledesigns Company Information



Piledesigns Limited is an independent consultancy providing practical geotechnical designs from tender through to construction.

We pride ourselves on giving our clients valued information, utilising our team of experienced and skilled engineers.

Piledesigns Ltd was founded in 2004, and has since grown to an established design practice in the ground engineering sector. The company now boasts a comprehensive team of full time designers offering over 100 years of combined experience.

This vast amount of specialist experience sees the company offer design and support services to many parts of the ground engineering/construction sector, be it contractor, engineer or client, both in the UK and internationally.

The company prides itself in finding the complete solution that offers risk mitigation, build-ability and economic benefits to its clients.

Piledesigns are active members of the Federation of Piling Specialist, Temporary Works Forum and The British Geotechnical Association.

Piledesigns have been engaged on a number of challenging projects both in the UK and overseas. Here are some recent project examples.

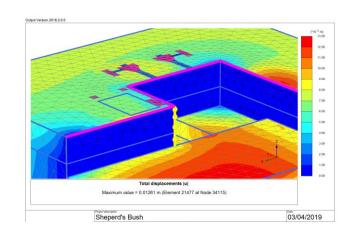
Knightsbridge

Piledesigns were commissioned to review a historic basement which had been left exposed for a number of years. The review included validating the structure and temporary works for a greater retained height, increasing the basement footprint.



Shepherds Bush

Piledesigns undertook 3D Finite Element Modelling for a large span retaining wall, with pile caps at ground level acting as restraints. The use of detailed modelling showed the deflections to be acceptable with greater accuracy over traditional 2D analysis.



01494 716333



enquiries@piledesigns.co.uk



www.piledesigns.co.uk



Unit 23, Chiltern Trading Estate, Earl Howe Road, High Wycombe, HP15 6QT











END