Kiosque Ltd
Consulting Engineers

26 Rosslyn Hill
London – NW3

Structural Engineering Strategy
Stage 2 Report

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Report Prepared For:

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Contents

Introduction – Project Description

It is proposed to redevelop the site Rosslyn Hill, London NW3 through demolition behind the retained front façade and the erection of a replacement three storey building with accommodation in the roof, comprising three apartments.

This report has been prepared to support the planning application for the new development and describes the general structural strategy for the new building.

The Site

Rosslyn Hill in Hampstead connect the south end of Hampstead High Street and the north end of Haverstock Hill (A502).

No 26 Rosslyn Hill front elevation is facing southwest and is adjacent to Hampstead Police station on its North boundary. On the South side of the site a brick retaining wall separates No 26 and Nos 22-24 properties.

There is a difference in levels between the front of the site at pavement level and the rear of the garden of approximately 3.20 m.

Consequently, access to the existing house lower ground floor from pavement level is through steps and a sloping footpath.

Existing Building

The existing building is a three-storey detached property comprising accommodation on the lower ground floor, upper ground floor and first floor.

Access from the pavement at higher level to the main house lower ground front and side entrance is via a series of steps and a sloping footpath to cater with the difference in levels between the lower ground floor and pavement at the front of the site.

The structural fabric of the building is typical of buildings of this type and period. It consists of solid load bearing masonry walls supporting internal suspended timber floors. The roofs over the main house are duo pitch timber frames roof with a mono pitch roof to the rear single storey part of the house. We expect these roofs to be timber cut rafters with timber purlins and struts supported on the front and rear elevation walls and on the internal loadbearing masonry walls.

Condition Survey

A structural survey and a foundations survey were carried out. These are included in Appendices 2 and 3 of this report.

As the project involves the demolition of the building with the retention of the front elevation wall only, we advise that a thorough condition survey of the front elevation and brick features is carried out prior to starting demolition and installing the façade retention system. The survey shall include extensive photographic records of all the façade features to be retained.

Equally, a survey of the boundary walls shall be undertaken and will form part of the information required for the Party Wall award.

Ground Conditions

No geotechnical investigation has been carried out to date and this will be commissioned in the next phases of the project.

However, the British Geological Survey maps and historical borehole records in the area reveal that the site geological strata consist of made ground over London Clay with the Woolwich and Reading Beds and Thanet Sand at greater depth (approximately 70.0 m below ground).

Substructure & Foundations

Main Foundations

The main foundations of the new building behind the retained façade consist of a traditional mass concrete trench fill foundation.

Based on the structural loading and anticipated ground conditions the preliminary design indicates 600 mm wide and 1.20 m deep foundations centred under the masonry load bearing walls above. A clay heave board shall be installed to the internal face of the external walls foundations to cater with lateral pressures created by the subsoil clay heave as described on drawing 1021-201.

Underpinning

Trial pits have been dug out to investigate the profile and depth of the existing garden wall foundations on the south side of the site. These indicate very shallow foundations.

Consequently, the brick garden wall will have to be underpinned as advised in the accompanying Boundary Wall Foundations Survey (see Appendix 3). The reinforced concrete underpins and toes create a new retaining wall to the garden at No 22-24 Rosslyn Hill which is higher than the proposed new lower ground floor. A 450 mm toe to the 250 mm thick underpin forms the structural slab in the lower ground floor in the area adjacent to the original brick garden wall (see details on drawing 1031-201).

The underpins and associated toes will be cast in 1.0 m length in a “hit and miss” sequence in order to maintain the stability of the wall and retained earth behind at all times.

Mini Piles – Screw Piles

It is proposed to build a new access ramp to the front of the building. The footprint of this element at lower ground level falls within trees T1 and T2 root protected areas. Consequently, a traditional trench fill foundations as per the main building cannot be adopted for the ramp foundations.

A screw pile foundations system with ground beams spanning between the piles and supporting the column and walkway frame structure is proposed for this part of the building.

Lower Ground Floor Slab

As the soil sub-strata is London Clay a suspended floor is proposed for the lower ground floor slab.

The proposed lower ground floor construction is a beam and block floor with 150 mm deep precast pre-stressed concrete beams at 525 mm centres with an aerated concrete block infill between the beams.

The beams are spanning between the new external and internal walls foundations as described above.

A 225 mm deep vented void will have to be maintained under the suspended floor construction with air vents installed within the external walls and internal walls to maintain cross ventilation.

Waterproofing

Waterproofing of the wall will be required along the underpinned brick wall between No 26 and No 22-24 as this wall is a retaining wall with the adjacent property garden behind at higher levels.

We recommend installing a waterproofing system to the toe of the underpinning in this area as well to prevent any ingress of water.

The waterproofing shall be Grade 3 waterproofing as defined in BS 8102 meaning no water penetration or damp is acceptable.

It is common practice in residential development to provide two lines of defence and two waterproofing systems.

Such systems can include a waterproof cementitious render applied to the internal face of the wall and top of the toe (eg SIKA render) together with a drained cavity (eg Delta Drain membranes) drained to the site drainage.

Superstructure

Floor Construction

Timber joists are used for the upper ground, first and second floors. However, in order to integrate the services within the floor construction depth and optimise the floor to ceiling heights it is proposed to use easy joists as opposed to traditional solid timber joists.

These joists consist of a timber top and bottom chords with metal web with large openings enabling horizontal services circulation within the floor thickness as illustrated below.

These joists are installed at 400 mm centres and are 225 mm deep. Tongue and groove floorboards screwed to the joists top chords create the floor subbase.

Easy joist floor construction

Vertical supports

The floors are supported by the new masonry walls as shown on the upper ground floor, first floor and second floor plans included in Appendix 1 of this report.

The new external load bearing walls supporting the floors are cavity wall construction with a brick outer skin and a 7N/mm^2 lightweight block inner skin. The internal load bearings walls consist of 200 mm thick lightweight blocks.

Where required, and as shown on the plans, steel beams are installed within the floor depth spanning between the loadbearing walls supporting the floors.

To the centre of the building a steel frame with steel columns down to foundation levels is installed to support stair and lift enclosure starting at the upper ground floor. Again, the steel frame beams are installed within the depth of the timber joists and consequently, no down stand beams are created in the ceilings.

Roof

The roof comprises a mansard to the front of the property and a flat roof behind the mansard.

The flat roof part construction is similar to the floor below and consist of easy joists at 400 mm centres to enable horizontal services circulation within the second floor ceiling.

Firing timber pieces are screwed to the top chord of the easy joists below the roof boarding to create the roof fall and provide adequate rainwater run off.

Where the internal loadbearing walls are not built up to the underside of the roof, steel beams are introduced to support the flat roof structure.

The mansard part of the roof is formed with cranked steel frames and 200 x 50 timber rafters supported on the second floor steel beams and the roof steel frames.

Progressive Collapse

Structural robustness and progressive collapse requirements are defined in the Building Regulations and based on the building type and number of storeys.

The proposed building is a multi occupancy building four storey high and consequently falls into the Consequence Category 2A buildings.

As the building is designed and will be constructed in accordance with the Building Regulations technical guidance documents additional measures are likely to be necessary for Consequence Category 2A buildings (eg ties, and anchorage to suspended floors to walls).

Lateral Stability

The lateral stability of the building is provided by the external masonry walls and the solid internal load bearing walls around the stairs and lift.

Retained Façade

The proposed development consists of demolishing the existing building and retain the front elevation from the lower ground level to the first floor ceiling level (new second floor level).

Consequently, in the temporary condition the three storey façade will be left with no lateral restraints and supports after the demolition of the internal floors, and walls.

A temporary steel frame façade retention system shall be installed to provide lateral restraints the free-standing retained wall

Prior to demolition of the building behind the façade a thorough condition survey shall be carried out of the retained front elevation. All brick and stone features, defects shall be logged with extensive photographic records kept.

Façade Retention System

The façade retention is installed on the outside of the wall thus enabling the works to be carried out in the inside of the building.

The lateral stability of the façade in the temporary conditions is provided by a series of steel frames three storey high installed on the outside of the façade one new foundations.

As the front of the property is partly within tree T2 root protected area (RPA), the new foundations for the temporary façade retention system consist of a series of reinforced concrete pad foundations / ground beams on screw piles. Therefore, this option minimises the amount of excavations within the RPA.

Braced steel towers / frames fabricated from standard steel sections (203 x 203 UC) are providing the lateral stability of the free-standing wall to be retained.

Horizontal waling steel beams spanning between the main steel frames / towers are installed typically at floor levels and bolted through the wall and clamping the façade. These beams shall be installed either above or below the future floor levels behind so that they will not clash with the future construction.

Prior to installing the façade retention system all windows and door frames will be removed and replaced by braced timber frames installed tight within the door and windows apertures. This will ensure that the existing openings will not distort during the demolition and in the temporary conditions.

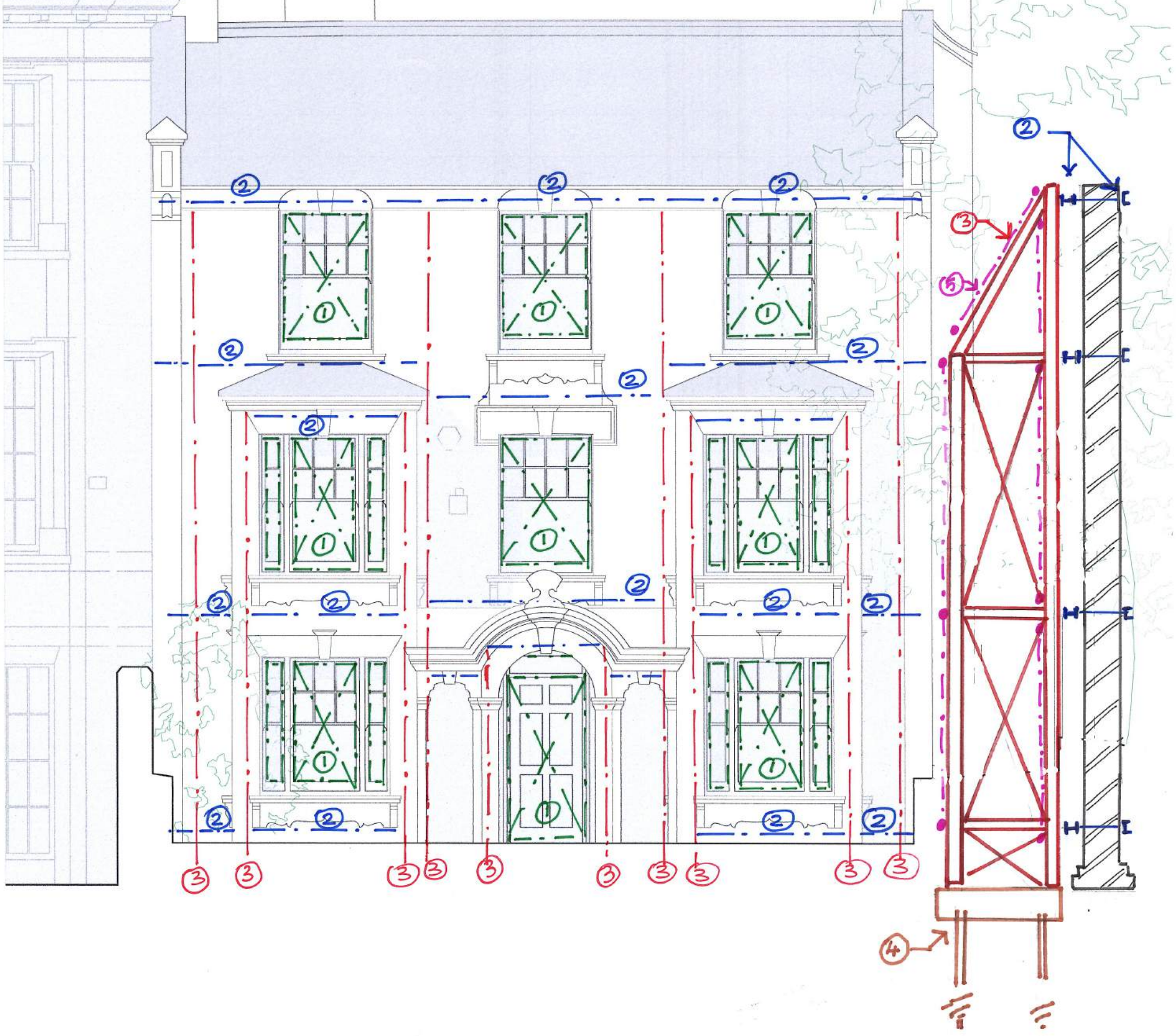
Once the retention system has been installed demolition will start.

Kiosque Ltd
Consulting Engineers

Sketch

Project:	26 Rosslyn Hill – NW3	Project No:	1031
Description:	Façade retention system Schematic	Date:	12/2022
		By:	TS
Filename:	1031-SK-221214-001	Page:	1

1. Remove existing window and door frames and install braced timber frames tight within aperture.
2. Waling beams bolted through wall and clamping wall.
3. Braced steel towers.
4. New RC footings / ground beams on mini piles / screw pile foundations
5. Cross bracing between braced steel towers.



Construction Methodology

Main Construction Sequence

The following is an outline of the proposed sequence of construction activities on site:

- Installation of façade retention system foundations.
- Installation of façade retention system.
- Demolition of the existing building.
- Underpinning of South boundary wall.
- Excavations to lower ground floor level formation levels.
- Trench fill foundations excavations.
- Installation of trench fill foundations.
- Construction of new masonry walls to underside of beam and block floor and DPC levels.
- Construction of lower ground floor beam and block floor.
- Construction of first lift of blockwork.
- Installation of rear steel frame to first floor.
- Installation of upper ground floor easy joists and steel beams.
- Construction of second lift of blockwork.
- Installation of first floor easy joists and steel beams.
- Installation of rear steel frame to second floor level
- Construction of third lift of blockwork.
- Installation of second floor easy joists and steel beams.
- Installation of roof and mansard steel frame.
- Installation of roof mansard timber and easy joists.

Next Stages Further Studies / investigations

Further studies and investigations will be required to develop the design to the next detailed stages and have been listed below:

Geotechnical Investigations:
Trial pits and boreholes together with soil analysis will be required to inform the ground conditions, soil contamination, ground water level required for the foundations design.

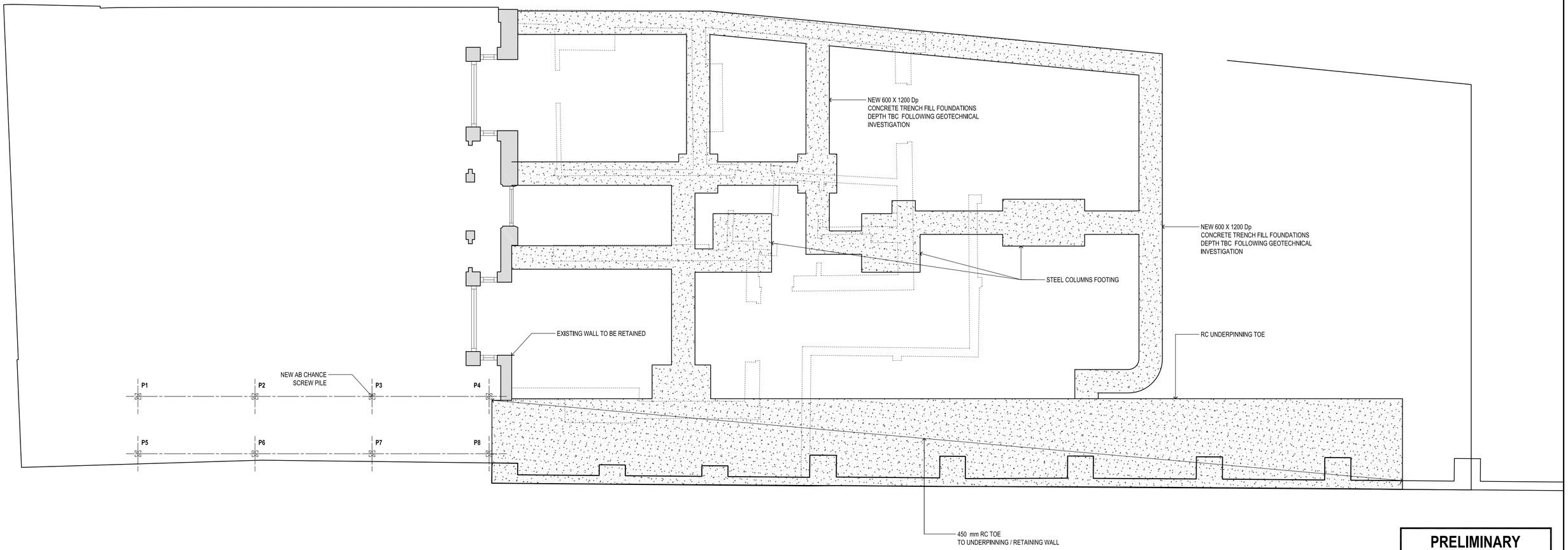
Condition Survey of the façade

Condition survey of the garden wall

Topographic survey and levels of the ground of adjacent properties along the boundary

Appendices

Appendix 1: Structural Drawings



PROPOSED FOUNDATIONS PLAN

(SCALE 1:50)

PRELIMINARY
10.03.2025

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P2	TDL	16.12.2022	BOUNDARY LINE UPDATED
P1	TDL	19.10.2022	PRELIMINARY

Project

26 ROSSLYN HIL

LONDON - NW3

Drawing Title

PROPOSED FOUNDATIONS PLAN

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Scales	1:50	Date	10/2022
Drawn	TDL	Checked	TS

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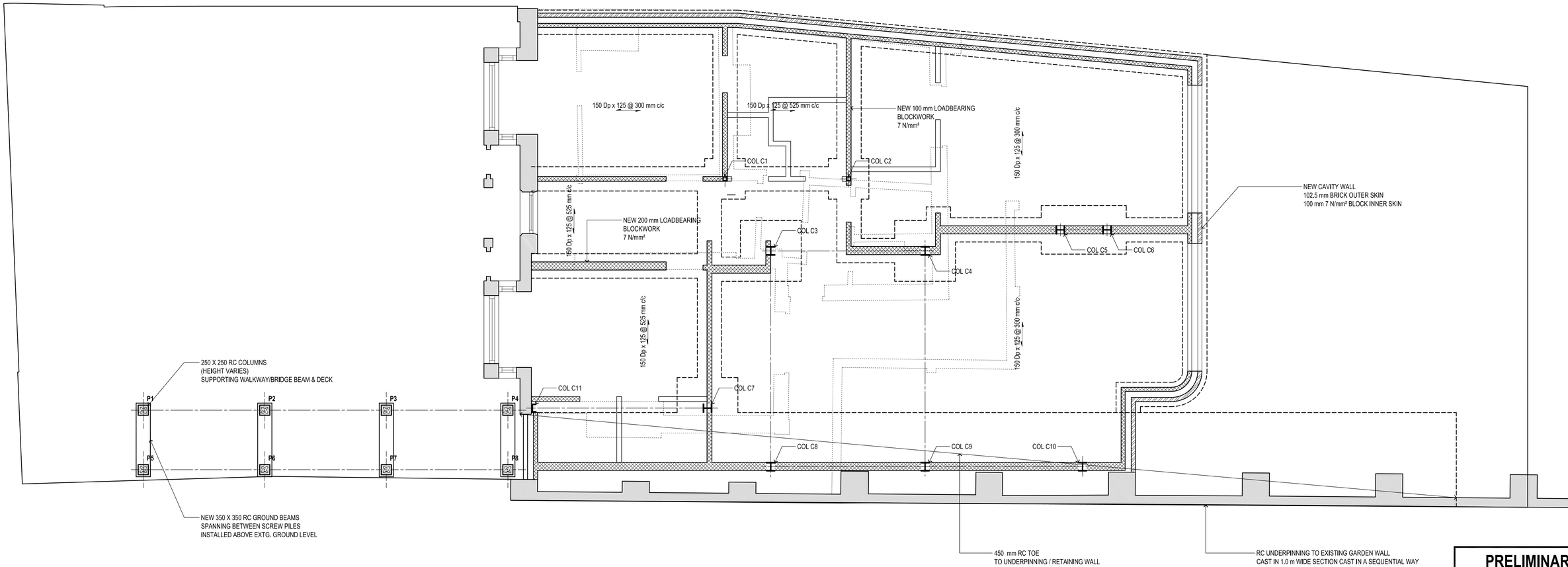

PROPOSED LOWER GROUND FLOOR
PLAN
(SCALE 1:50)

LEGEND

	DENOTES EXISTING WALL
	DENOTES EXISTING WALL TO BE DEMOLISHED
	DENOTES NEW SOLID BRICK WALL OR INFILL TO EXISTING WALL
	DENOTES NEW CAVITY WALL
	DENOTES NEW INTERNAL PARTITION WALL
150 Dp x 125	DENOTES SPAN DIRECTION OF CONCRETE BEAM & BLOCK FLOOR
	DENOTES SPAN DIRECTION OF NEW TIMBER FLOOR JOISTS
	DENOTES STEEL RESTRAINT STRAPS AS NOTED ON THE PLANS
	DENOTES STEEL BEAM OVER AT HIGH LEVEL
	DENOTES NEW STEEL BEAM WITHIN DEPTH OF FLOOR
~~FFL +7.920~~	DENOTES FINISH FLOOR LEVEL
SSL +7.720	DENOTES STRUCTURAL SLAB LEVEL
TOS +7.873	DENOTES TOP OF STEEL LEVEL
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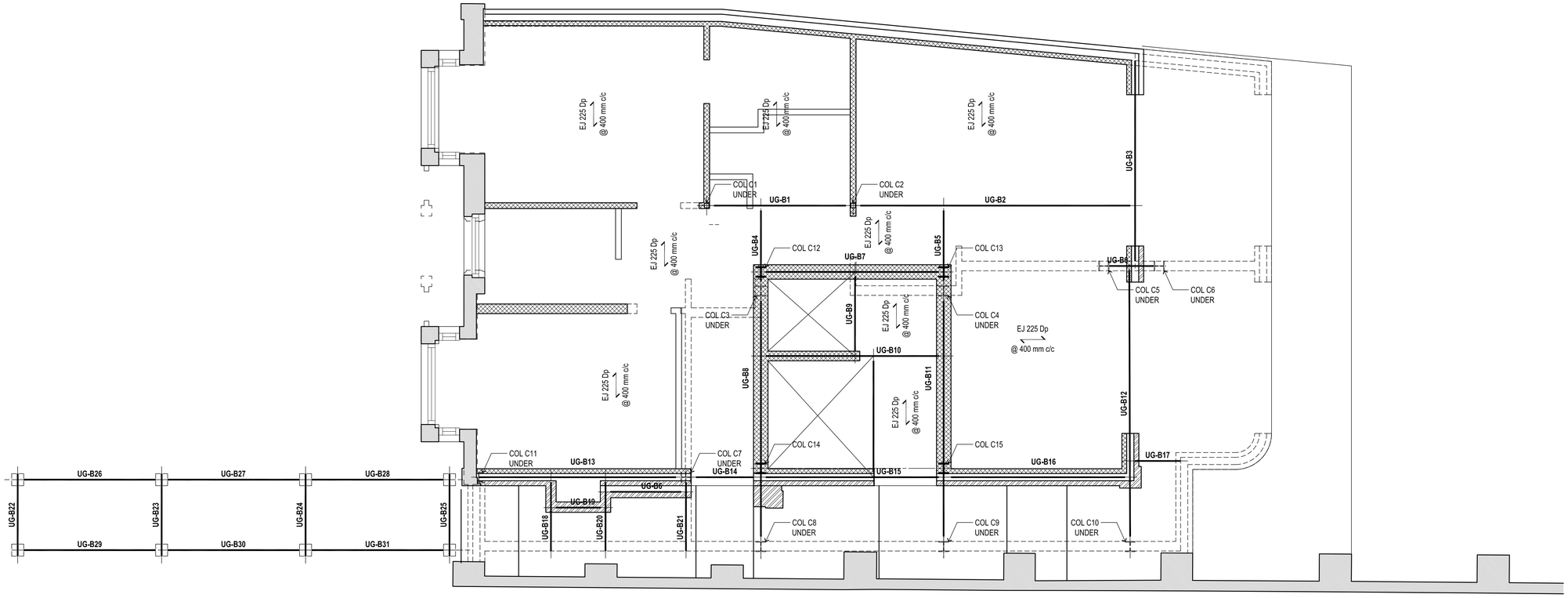
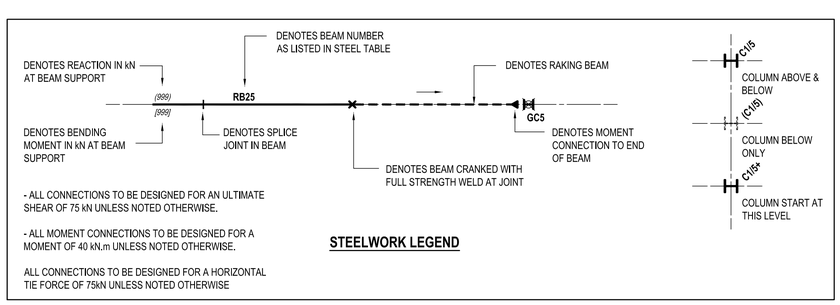


PROPOSED UPPER GROUND FLOOR PLAN
(SCALE 1:50)

PRELIMINARY
16.12.2022



STEELWORK LEGEND

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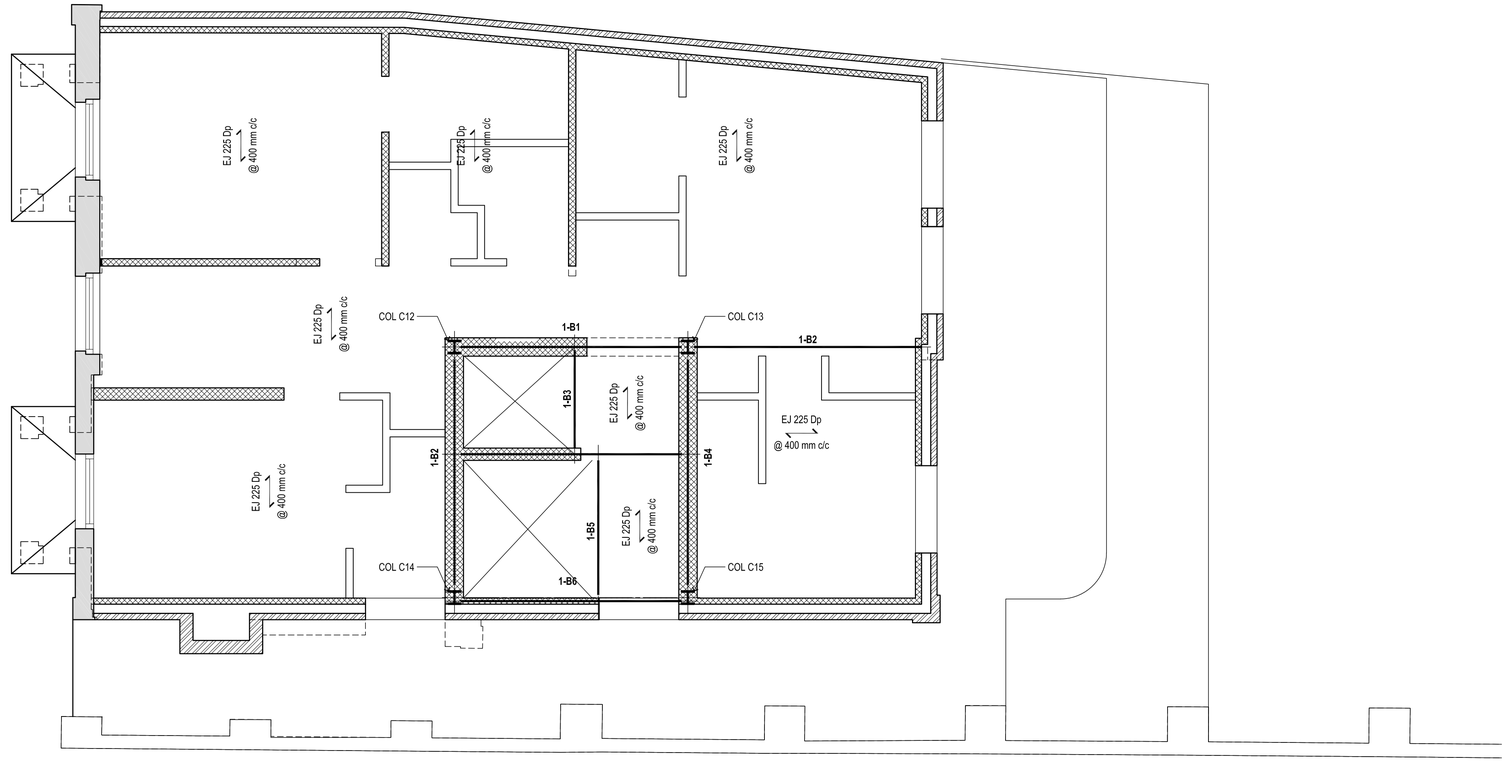

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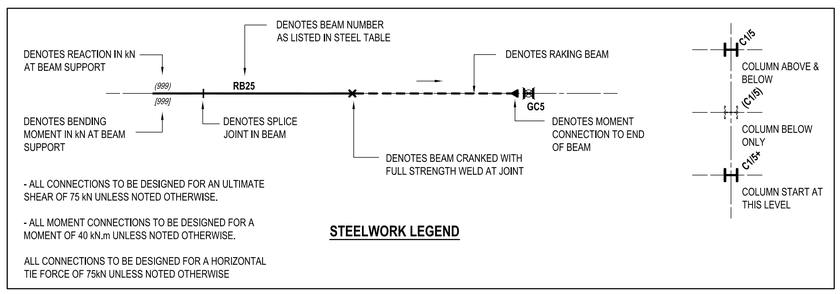

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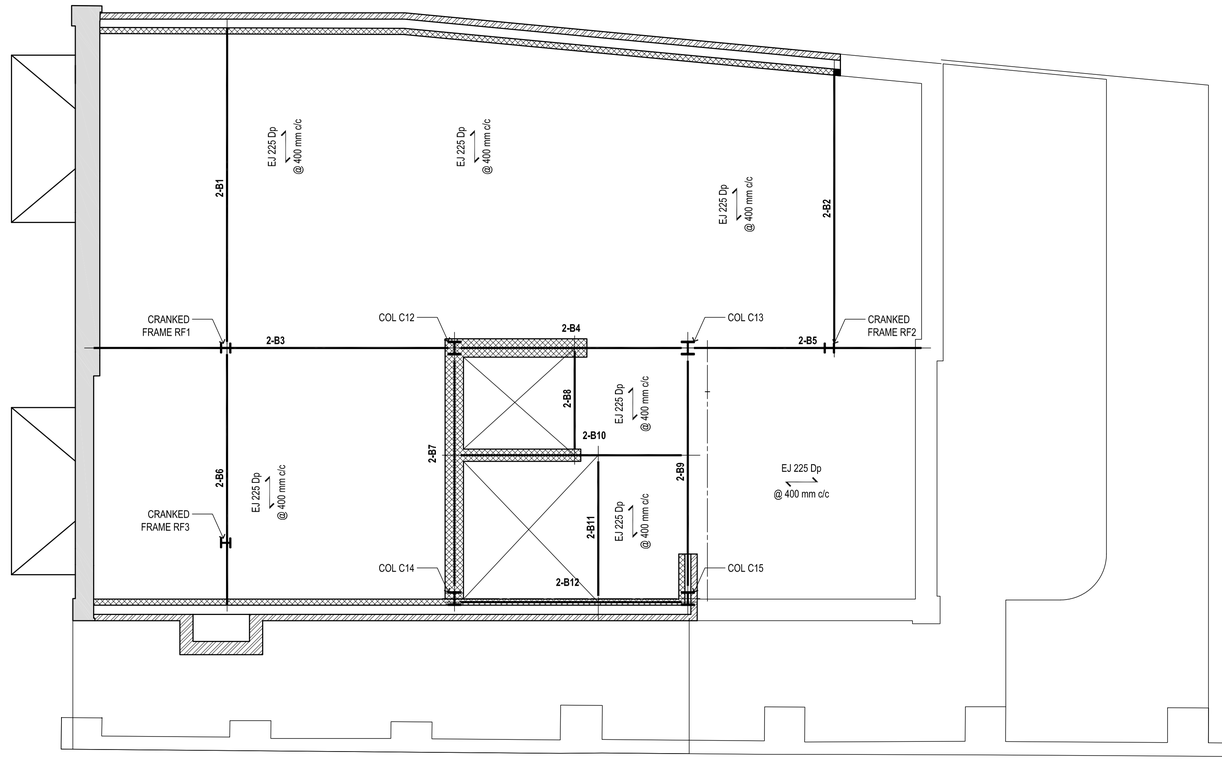
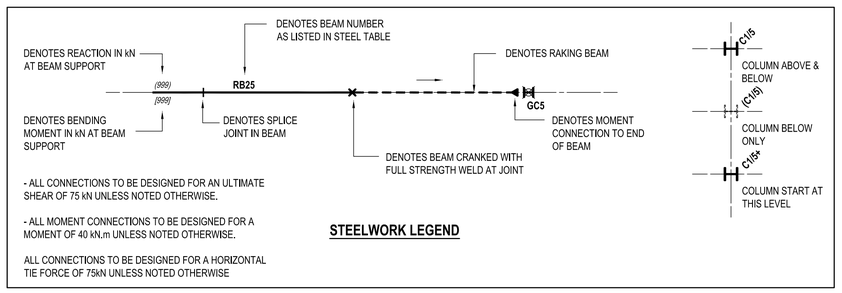


PROPOSED SECOND FLOOR PLAN

(SCALE 1:50)



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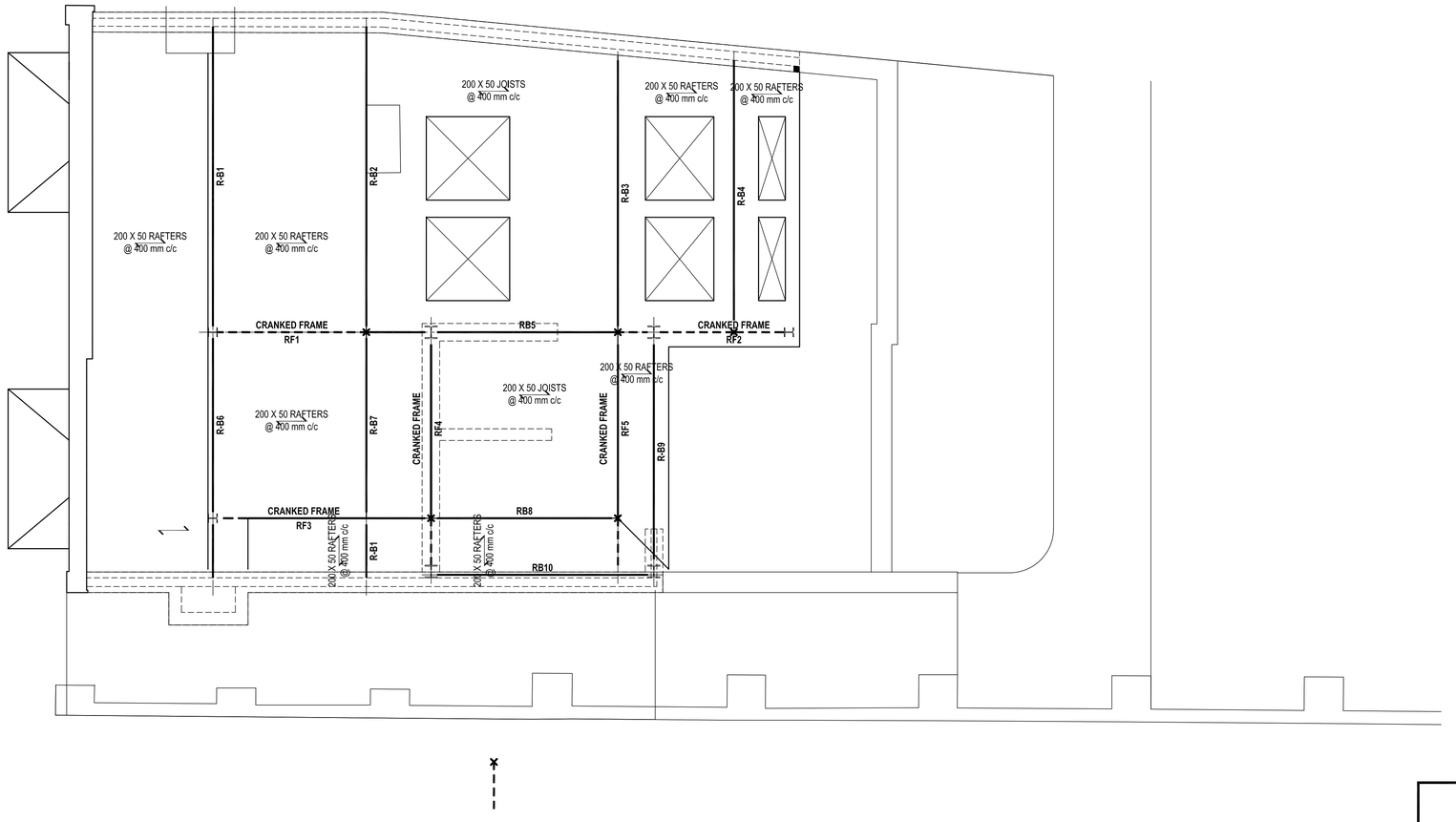

PROPOSED ROOF PLAN
(SCALE 1:50)

PRELIMINARY
16.12.2022

LEGEND

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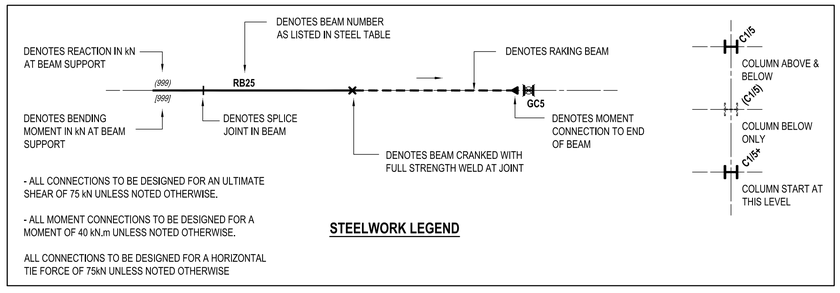

- ALL CONNECTIONS TO BE DESIGNED FOR AN ULTIMATE SHEAR OF 75 kN UNLESS NOTED OTHERWISE.

- ALL MOMENT CONNECTIONS TO BE DESIGNED FOR A MOMENT OF 40 kN.m UNLESS NOTED OTHERWISE.

ALL CONNECTIONS TO BE DESIGNED FOR A HORIZONTAL TIE FORCE OF 75kN UNLESS NOTED OTHERWISE

STEELWORK LEGEND

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Project No	Drawing No	Rev
1031	105	P2

Appendix 2: Structural Survey Report

Kiosque Ltd
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26 Rosslyn Hill
London – NW3

Structural Survey

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registered No 12797890, registered address: 20-22 Wenlock Road, London, N1 7GU

Report Prepared For:

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Date:	04/02/2025	Prepared by:	TS
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Filename:	1031-rep-002-P1-visual survey.docx	Status:	PRELIMINARY
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Revision:			
Revision Date:			
Kiosque Ltd, 20-22 Wenlock Road, London, N1 7GU t. 020 3740 0745 – e: mail@kiosque.co.uk			

Contents

Introduction

At the request of Simat Properties Limited a structural engineer from Kiosque Ltd visited the property 13 January 2025 and carried out a structural survey of the property.

This structural survey has been conducted to assess the condition of the property located at No 26 Rosslyn Hill, London NW3.

The purpose of the survey is to identify any structural defects, potential issues, and necessary repairs or maintenance. Equally, this report comments on the building structural adequacy for the proposed future redevelopment of the building.

The survey is based on a visual inspection of accessible areas and does not include invasive investigations unless explicitly stated

Trial pits were dug prior to the survey to ascertain the foundations profile and depth, the findings are described in Appendix 2 of this report.

Local opening ups of floor and ceilings were carried out prior to the survey exposing floor construction and condition.

The Site

Rosslyn Hill in Hampstead connect the south end of Hampstead High Street and the north end of Haverstock Hill (A502).

No 26 Rosslyn Hill front elevation is facing southwest and is adjacent to Hampstead Police station on its North boundary. On the South side of the site a brick retaining wall separates No 26 and Nos 22-24 properties.

There is a difference in levels between the front of the site at pavement level and the rear of the garden of approximately 3.20 m.

Consequently, access to the existing house lower ground floor from pavement level is through steps and a sloping footpath.

Existing Building

The existing building is a three-storey detached property comprising accommodation on the lower ground floor, upper ground floor and first floor.

Access from the pavement at higher level to the main house lower ground front and side entrance is via a series of steps and a sloping footpath to cater with the difference in levels between the lower ground floor and pavement at the front of the site.

The structural fabric of the building is typical of buildings of this type and period. It consists of solid load bearing masonry walls supporting internal suspended timber floors. The roofs over the main house are duo pitch timber frames roof with a mono pitch roof to the rear single storey part of the house. We expect these roofs to be timber cut rafters with timber purlins and struts supported on the front and rear elevation walls and on the internal loadbearing masonry walls.

Ground Conditions

No geotechnical investigation has been carried out to date, and this will be commissioned in the next phases of the project.

However, the British Geological Survey maps and historical borehole records in the area reveal that the site geological strata consist of made ground over London Clay with the Woolwich and Reading Beds and Thanet Sand at greater depth (approximately 70.0 m below ground).

Findings

All room notation, trial pits and locations of structural defects are shown on the plans in Appendix 1 of this report

Lower Ground Floor

Foundations

- Trial pits were dug prior to the survey in rooms LG #1 and LG #2 to ascertain the depth and profile of the foundations. The findings are described in Appendix 2 of this report.
- Water was present at the bottom of trial pit 1.
- The foundations typically consist of the brick wall sitting on a concrete footing bearing on a clay sub-strata.
- Foundations to the side external wall in room LG #1 are only 800 mm deep.
- To the rear of the property the external wall foundations in the toilet area consists of the brick wall bearing directly onto the sub-soil with no concrete footing at the depth of 0.5 m. At this location, locally, a 900 mm void under the wall was noted. This void could be an underground cistern, well or chamber. No lintels or concrete beams were installed, and the external wall was bearing directly above this void with no apparent support locally.

Floors

- The floors in the front of the property consists of a suspended timber floor with the floor joists spanning front to back.
- The void under the floor joists is inadequate as being too shallow and poorly vented.
- Some joists are built into the brick wall with no damp proof course (DPC) on the vertical faces of the timber protecting the timber from water ingress.
- Some local staining and decayed of the timber subfloor and timber sole plates were noted.
- Notches have been cut in some joists to accommodate for services and pipes. These notches, sizes and locations are beyond the recommended minimum sizes, locations and limitations as per the Building Regulations Part A.
- To the rear of the property, in the lower part of the building the floors construction is ground bearing solid concrete slabs measured at 200 mm thick in one location. It is unclear whether adequate insulation and a damp proof membrane (DPM) have been installed under these floors.

Walls

- As the property has been unoccupied and unheated for a long period of time there is a high level of dampness within the solid brick walls especially around the bay windows. Defective paster finishes were noted throughout this floor.
- Cracks in the brick wall were noted internally in room LG #1 in the rear wall adjacent to the window. This crack is reflected externally at the same location and would indicate local movement in this area.
- Cracks in the hallway between rooms LG #1 and LG #2 adjacent to the window was noted. This crack appears at this location on the upper levels.

Ceiling & Roof Above

- Mould growth was noted to the ceiling of the rear toilets.
- Sign of dampness and water staining could be seen in the ceiling of room LG-#3.
- The mono pitch roof timber structure above room LG-#4 was locally exposed. Some timber rafters appeared to be stained and water ingress within the roof space was noted probably from failing flashings.

Ground Floor

Floors

- The floors are typically suspended timber floor with floor joists at 400 mm c/c.
- In room G #2 the joists are spanning from the side wall to the internal wall adjacent to the stair and are only 100 deep by 50 at a closer centre. The floor is very lively when carrying out a drop heel test. These joists sizes are usually used for ceiling joists not floor joists.
- The rear of the property joists are deeper joists typically 225 x 50 and appears to be more recent construction.
- The original joists and timber joist plate are built in the wall.
- Fungal growth was noted on the joists with sign of local decay to some of them.
- Notching and drilling for services were noted in some joists exceeding the recommended maximum depth and locations.

Walls

- Damp walls with defective paster finishes were noted throughout this floor.
- Cracks in the brick wall were noted internally in room G #2 adjacent to the door.
- Cracks in the hallway between rooms G #1 and G #2 adjacent to the window was noted. This crack appears at this location on the first floor.
- Cracks to the underside of the window in room G-#3 was noted. This crack appeared at the same location at first floor level above.

First Floor

Floors

- In room 1-#2 the joists are spanning from the side wall to the internal wall adjacent to the stair and are only 100 deep by 50 at a closer centre. The floor is very lively when carrying out a drop heel test. These joists sizes are usually used for ceiling joists not floor joists.
- Extensive fungal growth observed from the ground floor ceiling was noted on the floor joists of the rear toilets and shower room.
- Notches have been cut in some joists to accommodate for services and pipes. These notches, sizes and locations are beyond the recommended minimum sizes, locations and limitations as per the Building Regulations Part A.

Walls

- Damp walls with defective paster finishes were noted throughout this floor.
- Cracks in the wall along the stair was noted. This crack appears at this location on the first floor.
- Cracks in the hallway between rooms 1-#1 and 1-#2 adjacent to the window was noted. This crack appears at this location on the ground floor.
- Cracks to the underside of the window in room 1-#3 was noted. This crack appeared at the same location at first floor level above.

Roof

- No access to the roof space was provided. However, the roof timber was observed through an opening in the ceiling on the first-floor stair landing.
- The roof rafters appeared wet with mould growth locally.

Externally

- Vegetation growth to roof parapet, blocked gutters with debris and vegetation were present throughout.
- Decayed timber windows and failing window cills were noted.
- Moss growth to the face of walls were noted locally due to leaking rain water goods.
- Brick pointing was defective in some locations on the side and front elevations.

Discussions – Recommendations

Foundations

- The foundations to the bay windows and to the side wall appeared to be shallow and less than 1.0 m deep. This is typical of some properties of this period and type of construction where bay window foundations are shallower than the main foundations. This might lead to differential settlement and cracks appearing around bay window. Consideration for underpinning the bay window as part of the new building redevelopment shall be given.
- Cracks and movement in walls were noted in some external walls (front wall and rear wall). These cracks would indicate that differential movement has occurred at foundation level. In addition to repairs and strengthening the walls (eg installation of Helifix bars in masonry joints to bond walls junction together) local underpinning of the foundation shall be considered.
- The new redevelopment might require lowering the existing floors to achieve better headroom in the lower ground floor rooms. If a new concrete floor is installed including insulation and a screed at a lower level, the new ground bearing slab at a lower level might undermine the existing foundations (particularly in the front bay windows area where the foundations are shallow). Consequently, as part of the redevelopment of the property an allowance shall be made for underpinning some of the retained walls.
- The new development and new internal structural elements to be installed will modify the loading pattern on the existing load bearing walls. Consequently, foundations reinforcement (eg pad footing, local underpinning) might be required under load concentrations arising from new structural beams or columns installed to suit the new layouts and floors.
- A void under the foundations was noted in the rear lower ground floor toilets, with the brick wall bridging over the void with no lintel of reinforced concrete beam. This shall be investigated further. The void shall be filled with concrete and local underpinning of the foundation shall be carried out to ensure the wall above bear on sound ground.

Floors – Lower Ground Floor

- To the front of the property the floors are suspended timber floors with an inadequate vented void under (the void is too shallow with poor or non-existent cross ventilation). Considering the high level of dampness in the house, it is highly probable that at some locations these joists have decayed with time. Equally, some joists have been extensively notched and are built in the solid brick walls with no DPC to protect them from water ingress through the solid masonry walls. Consequently, we recommend that these floors are removed and replaced with a ground bearing slab with adequate damp proof membrane (DPM) and insulation.
- To the rear of the property, the floor consists of a solid concrete slab. It is unclear at this stage whether a damp proof membrane and insulation has been installed under the slab. It is highly likely that if insulation has been installed it does not comply with the requirements of the latest Building regulations. Consequently, and in the light of a future redevelopment of the property we will recommend removing the existing ground bearing concrete flat throughout the rear of the property to enable the installation of below ground drainage, damp proof membrane and adequate insulation.

Floors –Ground Floor & First Floor

- The floor joists in room G-#2 and 1-#2 consist of 100 deep only joists and the floor appeared to be lively and bouncy under the drop heel test. These joists sizes are usually used for ceiling and shall be replaced by deeper joists to suit the span of the joists.
- A high level of dampness, fungal growth and local decay was noted. We suspect that once all ceilings and floor boards will be removed a more widespread problem of timber dampness and decay will be uncovered. Consequently, we will recommend that during the future development the timber joists are replaced throughout the floor.
- The original timber joists are built in the solid masonry wall. Ingress of water through the wall will lead to the decay of the joists ends. Consequently, any new joists shall be installed on joists hangers fixed to a timber wall plate running along the face of the brick walls. A DPC shall be installed between the new wall plate and solid brick wall to protect the timber from any water ingress.

Floors –Generally

- Floors joists shall be tied to the walls to provide lateral restraints to the walls as specified in the building regulations. This was not the case in the property at any floors. These horizontal ties consist of 30 x 5 galvanised steel straps installed at 1.20 m centres along the length of the wall, built into the wall and screwed down to the joists. The provision of ties will tie wall to floor together and improve the overall robustness and rigidity of the property.

Walls

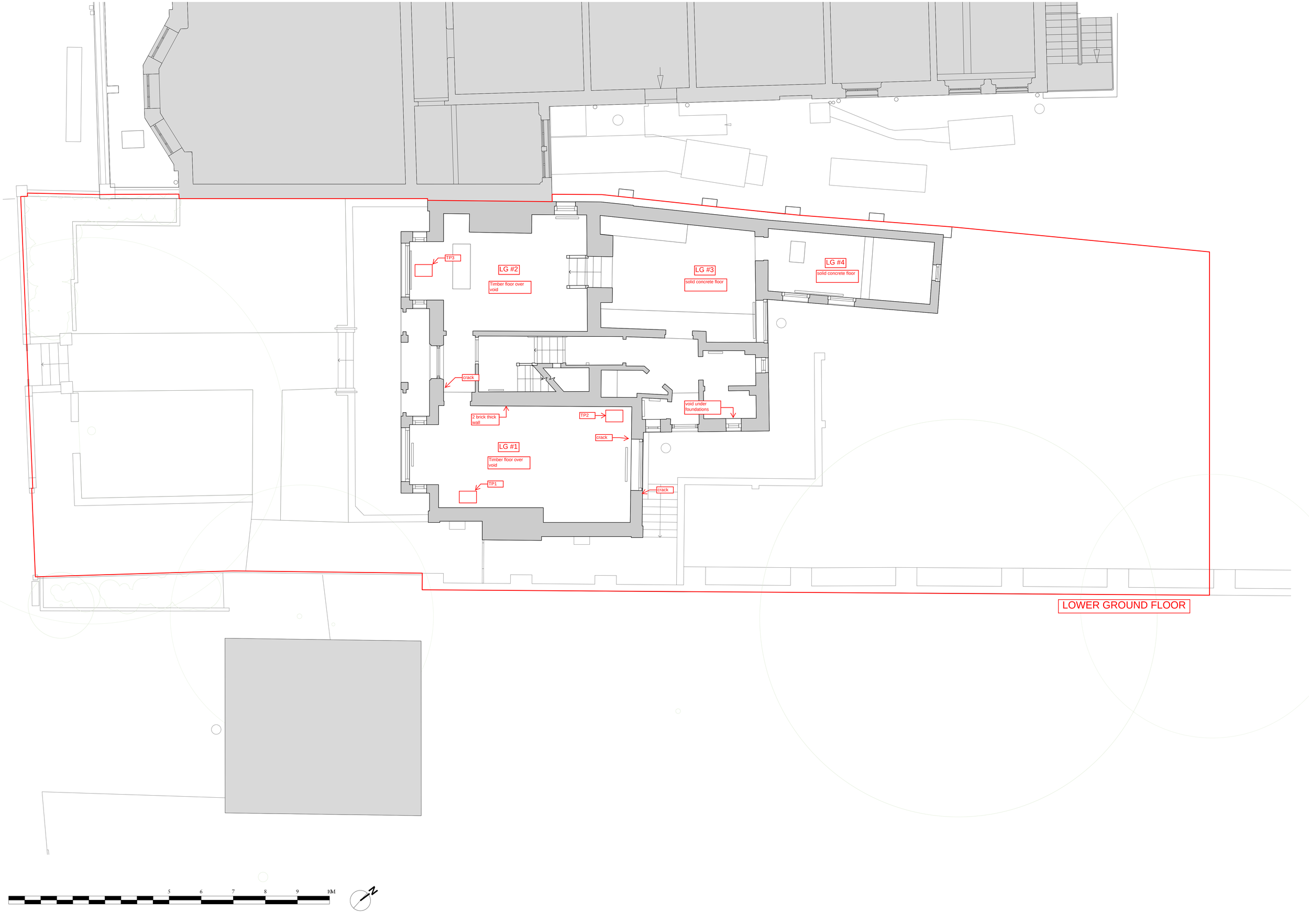
- High level of dampness was noted throughout the building within the solid brick walls with defective plaster finishes. Consequently, we recommend that the plaster finishes are removed throughout the building exposing the original brick fabric.
- As part of the future development, consideration shall be given to upgrading the damp proof course (DPC) and injecting a new DPC within the walls at lower ground level to enhance the damp protection and stop any rising damp.
- Where structural cracks where observed, local stitching of the walls shall be carried out by inserting stainless steel reinforcement bars (eg Helifix bars) within the brick joints.
- Equally, allowance shall be made for inserting concrete reinforcing elbows in wall corners to provide additional tying support where movement has occurred and improve the overall lateral stability and robustness of the building.
- Externally we will recommend an overall cleaning of the walls to remove any moss growth with repointing carried out.
- Flashing, DPC to parapet coping stones shall be inspected and replaced where necessary.

Roofs

- We have assumed that as part of the future development the roof will be remodelled to accommodate any skylight and extension.
- Consequently, a new roof shall be installed replacing the existing decayed rafters, failing roof covering and flashings.

Appendices

Appendix 1: Plans


TP3
LG #2
Timber floor over void
LG #3
solid concrete floor
LG #4
solid concrete floor
crack
2 brick thick wall
TP2
crack
void under foundations
LG #1
Timber floor over void
TP1
crack
LOWER GROUND FLOOR
5
6
7
8
9
10M
N

G #1

G #3

G #4

G #5

G #2

crack

crack

crack

crack

crack

crack

Denotes span of 100 x 50
floor joists

GROUND FLOOR

0 5 6 7 8 9 10M

N

1 #1

1 #3

crack

crack

crack

crack

1 #2

Denotes span of 100 x 50 floor joists

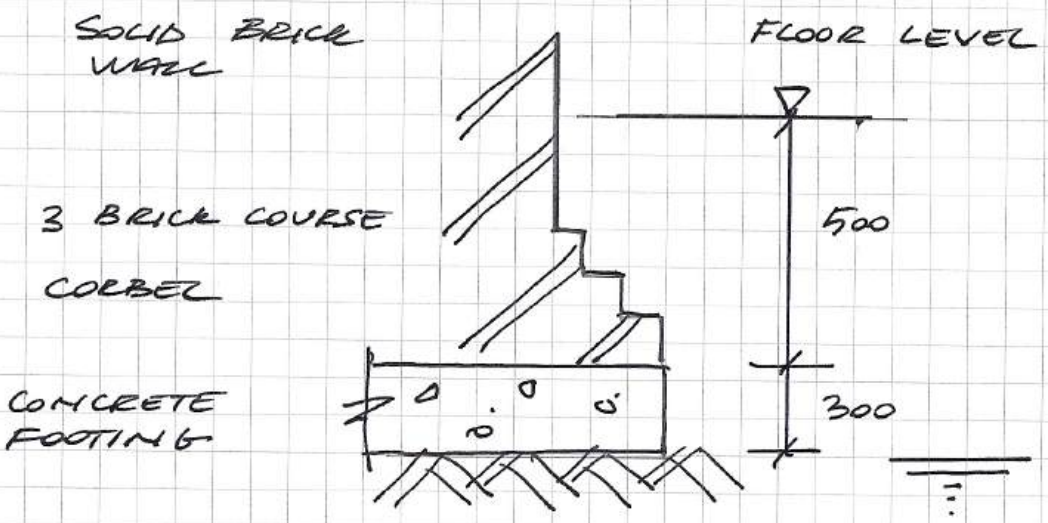
FIRST FLOOR

0 5 6 7 8 9 10M

N

Appendix 2: Foundations – Trial Pit Findings

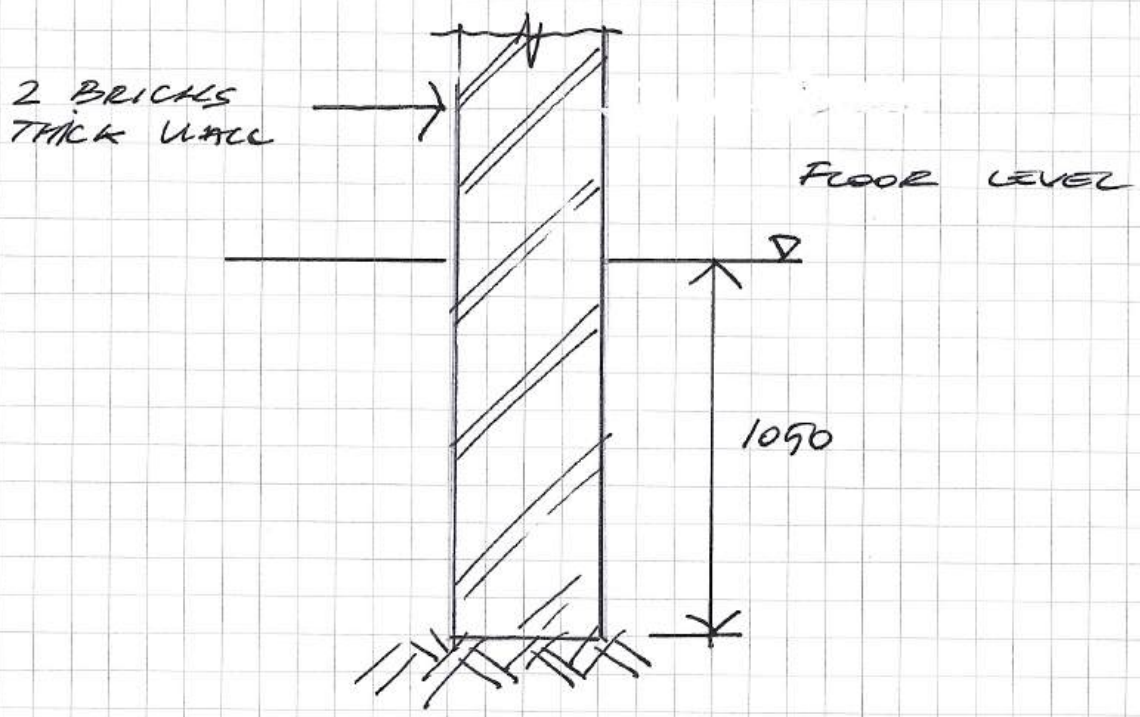
Project:	23 ROSSLYN HILL - NW3	Project No:	1031
Description:	TRIAL PIT #1	Date:	01/2025
		By:	TS
		Revision:	
Ref:		Page:	



TRIAL PIT 1

FOUNDATIONS

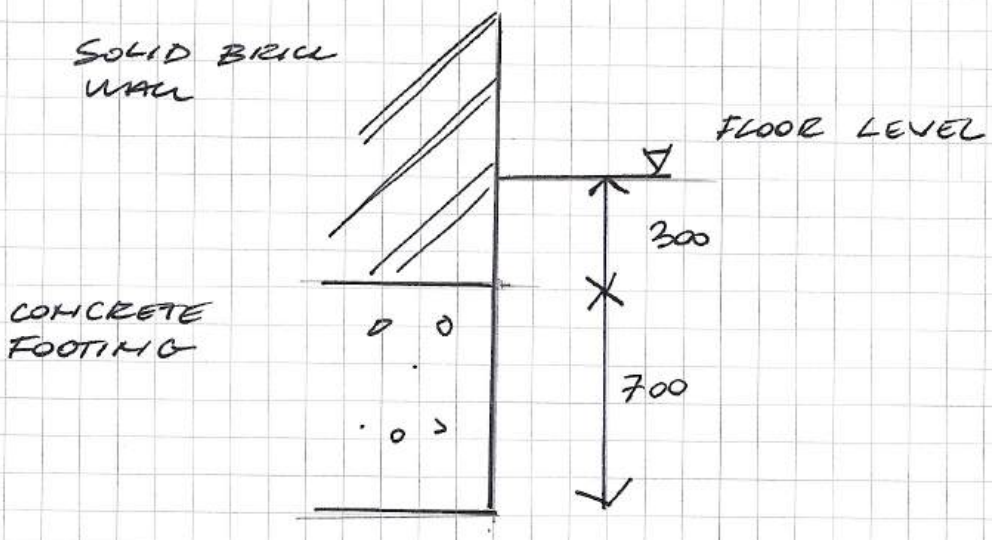
Project:	23 ROSSLYN HILL - NW3	Project No:	1031
Description:	TRIAL PIT #2	Date:	01/2025
		By:	TS
		Revision:	
Ref:		Page:	



TRIAL PIT 2

FOUNDATIONS

Project:	23 ROSSLYN HILL - NW3	Project No:	1031
Description:	TRIAL PIT #3	Date:	01/2025
		By:	TS
		Revision:	
Ref:		Page:	



TRIAL PIT #3

FOUNDATIONS

Photos

Trial Pit 2

Trial Pit 3

Void under foundation

Crack in wall adjacent to bay window

Crack adjacent to window in top landing

Crack under window in rear rooms

Crack in wall in rear room at first floor

Fungal growth in timber

Crack in external wall

Appendix 3: Boundary Wall Foundations Survey Report

Kiosque Ltd
Consulting Engineers

26 Rosslyn Hill
London – NW3

Partial Visual Survey
Boundary Wall Foundations

Kiosque Ltd, 20-22 Wenlock Road, London, N1 7GU
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registered No 12797890, registered address: 20-22 Wenlock Road, London, N1 7GU

Report Prepared For:

Simat Properties Limited
2nd Floor – Hygeia House
66 College Road
Harrow
HA1 1BE

Date:	22/08/2023	Prepared by:	TS
Reference:	1031-rep-002	Checked by:	
Filename:	1031-rep-002-P1-visual survey.docx	Status:	PRELIMINARY
Revision:	P1		
Revision Date:	22/08/2023		
Revision:			
Revision Date:			
Kiosque Ltd, 20-22 Wenlock Road, London, N1 7GU t. 020 3740 0745 – e: mail@kiosque.co.uk			

Contents

Introduction

At the request of Simat Properties Limited a structural engineer from Kiosque Ltd visited the property 21 August 2023 and carried out a partial visual survey.

The purpose of the visit was to assess the adequacy of the foundations of the boundary wall between No 26 and No 24 Rosslyn Hill, London NW3.

A trial pit had been excavated in front of the wall prior Kiosque Ltd visit down to the foundations formation level enabling the depth and profile of the wall foundations to be surveyed and ascertained.

Findings

- The boundary wall is a solid brick wall 1 brick thick (9”) at the top and 675 mm thick at its base (see sketch 1031-SK-230822-001).
- 440 x 557 mm brick piers at 3.30 m c/c provide lateral stability to the wall.
- A movement joint has been installed between each pier along the length of the wall.
- The ground on No 24 side is higher than on No 26 and the wall retain approximately 0.5 m of soil behind.
- The wall is a substantial brick construction given the required purposes.
- The wall appears to be in good condition with no sign of distress or structural damage.
- The wall foundations consist of a stepped concrete footing 150 mm thick only and typically 225 mm below ground level on No 26 sides.
- The substrata at foundations formation level consists of Clay soil.
- Steps in the wall concrete footing have been introduced to follow the sloping external ground level on the No 26 site, sloping down towards the rear of the site.
- At one location the step has been installed slightly above ground level (see Photo 3) and consequently the foundations formation level at this location is only 150 mm below ground level.
- No overlap has been installed at the step between the higher and lower level concrete footing (see Photo 2).
- Roots, including a large approximately 60 mm diameter root, below the foundations were noted in the trial pit. These roots appear to be from the plane tree on the other side of the wall on No 24 garden.

Discussions – Recommendations

- The foundations as surveyed in the trial pit are very shallow foundations and lie within the zone of influence of the trees on No 24 side.
- The foundations depths do not comply with the NHBC Standards “Part 4 Foundations Ch 4.2 Building Near Trees”. In shrinkable soils (eg Clay soils), the substrata changes in volume as moisture content fluctuates seasonally, including the action of tree roots which exacerbate the shrinkage of the substrata by drawing water and moisture from the ground. The resulting shrinkage or swelling can cause damage to the foundations and the structure above.
- Equally, as tree roots expand in diameter, they can cause damage to the foundations by exerting upwards pressure to the foundation and structure above.
- The stepped foundations have been installed with no overlap at the change in level of the footing (see Photo 2). Consequently, there is a weak point at the step location and should ground movement occur, cracks could develop from this point.
- Following the NHBC guidance the foundations of the wall should have been designed and installed deeper for the formation level of the concrete footing to lie outside the zone of influence of the tree roots.
- Although no sign of structural damage was noted to the wall the presence of roots under the foundations and the very shallow depth of the concrete footings would indicate that there is a high risk that structural damages and movements could occur in the future.
- A preventive measure to make the wall futureproof would be to increase the depth of the foundations and underpin the wall to such depths so that the bases of the underpins are outside the tree roots influence zone.
- We understand that it is proposed to develop the site and that as a result the existing ground adjacent to the wall will be reduced. The preventive measures recommended above apply regardless of the development proceeding or not.
- In the view of high risk of potential structural damages, which could occur in the near future, we recommend that the wall is underpinned as described above at the earliest opportunity.

Photos

Photo 1: Brick Garden Wall

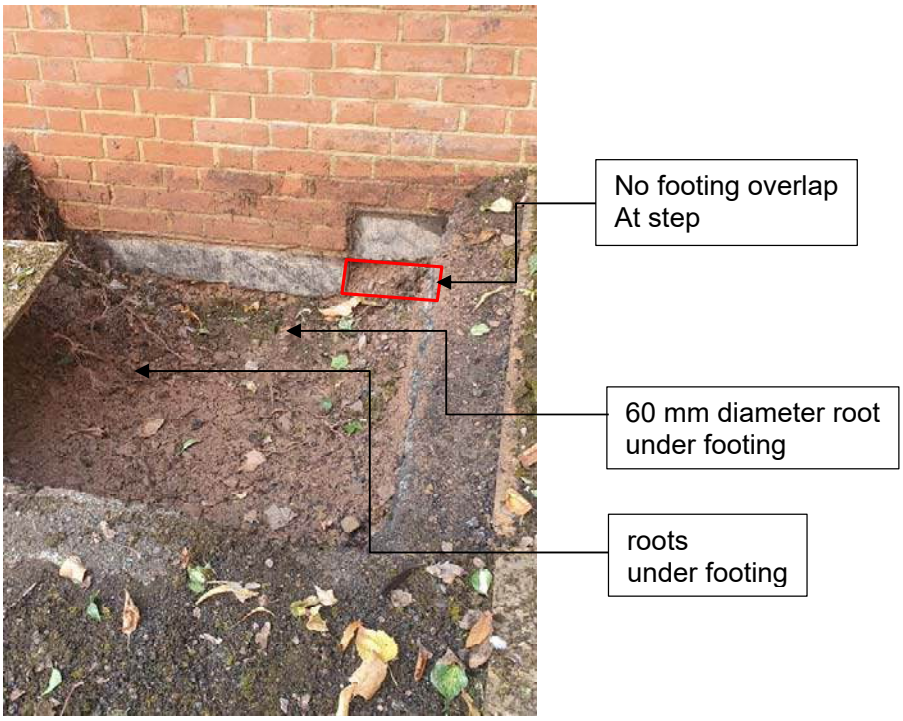


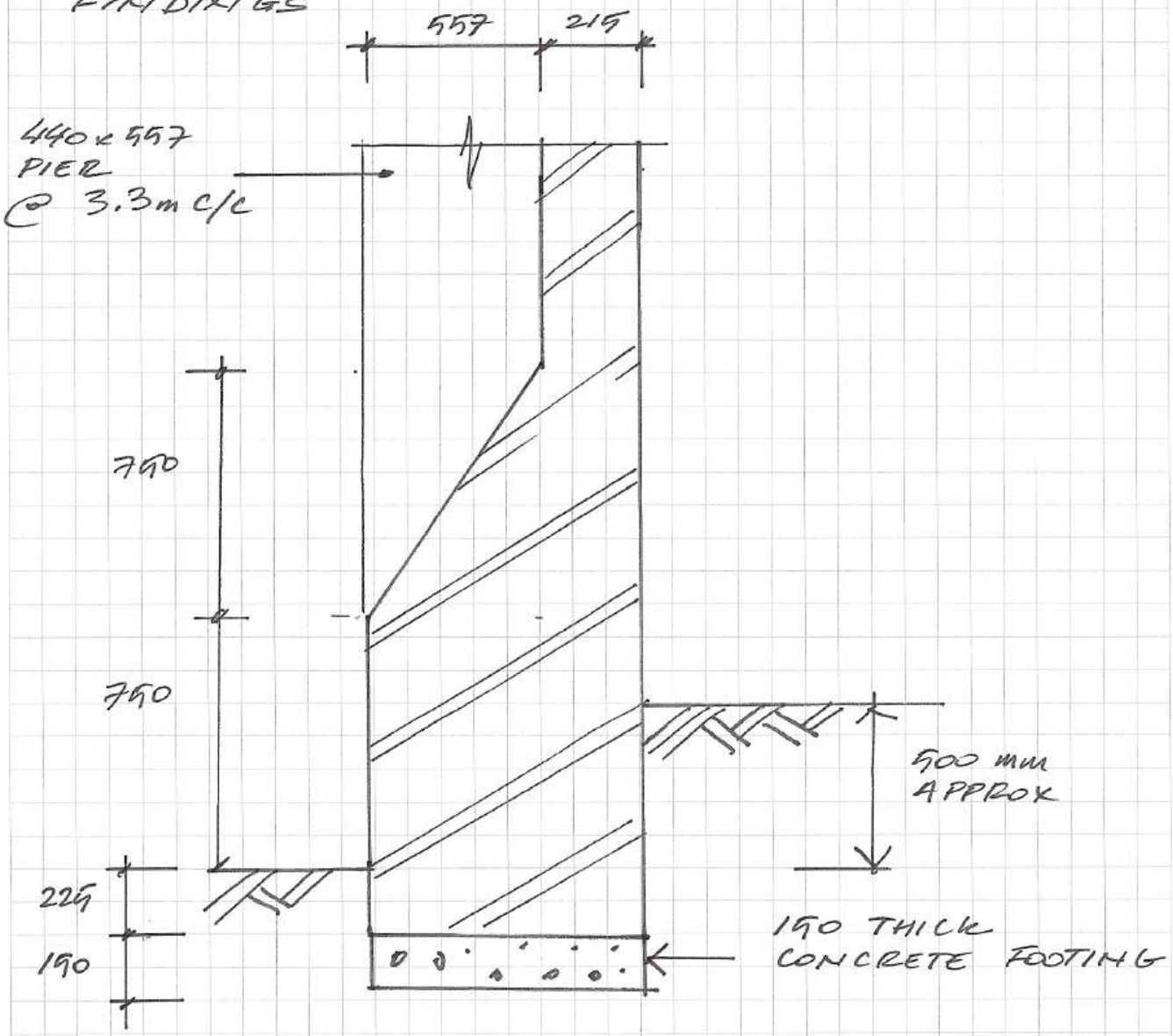
Photo 2: Trial Pit - Wall Foundations

Photo 3: Wall Foundations at or Above Ground Level

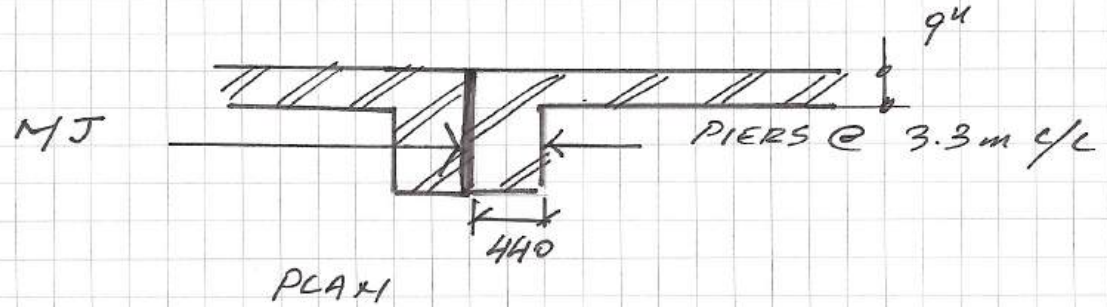
Sketch

Project:	26 ROSSLYN HILL NW3	Project No:	1031
Description:	BOUNDARY BRICK WALL FOUNDATIONS	Date:	08/23
		By:	TS
		Revision:	
Ref:	1031-SK-230822-001	Page:	

FOUNDATION PROFILE FROM TRIAL PIT FINDINGS



TYPICAL SECTION



PLAN