Ingealtóir

CONSULTING STRUCTURAL ENGINEERS

31 OVAL ROAD

LONDON

NW1 7AE

0 2 0 7 2 6 7 7 5 4 0 TEL

post@ingealtoir.com EMAIL

www.ingealtoir.com WEB

LONDON BOROUGH OF CAMDEN

BUILDING IMPACT ASSESSMENT FOR PROPOSED SUBTERRANEAN WORKS AT:

25 GLENMORE ROAD LONDON NW3

Client:

Mr & Mrs Dwyer

Architect:

Brinkworth Designs Ltd

Version	**Date**	**Comments**	**Completed by**
1	12-07-31		David Warren

CONTENTS

1.0 TERMS OF APPOINTMENT:

1.1 INGealtoir, Consulting Structural Engineers, were instructed by Mr & Mrs Dwyer to prepare a Building Impact Assessment for the proposed basement extension works to the property at no 25 Glenmore Road, London NW3.

1.2 This report is in response to The Camden Development Policy DP27, (Basements and Lightwells) . the report is compiled in accordance with the guidelines set out in PG4: 'Guidance for Subterranean Development' (2010). It is noted that this proposal is a 'small' scheme (ref cl. 3.2).

1.3 The report is based on the following drawings issued by Brinkworth Ltd:

2591-A201-1B-3B

2591-A203-1B

2591-E101

1.4 Ingealtoir extends a duty of care to Mr and Mrs Dwyer to exercise reasonable care and diligence in the performance of our service.

1.5 All directions are given facing the elevation in question.

2.0 TERMS OF REFERENCE:

2.1 Following the format guidance in The Camden Policy Guidance PG4, the stages for the Basement Impact Assessment are:

Stage 1 – Screening

Stage 2 – Scoping

Stage 3 – Site investigation and study

Stage 4 – Impact Assessment

Stage 5 – Review and decision making

This report follows the Flow Charts and uses the Figurative information given in the Camden Geological, Hydro-geological and Hydrological Study to submit data with relevance to the small scale of this project to address stages 1 and 2.

2.2 The Flowcharts of the Appendix E to the Camden Geological, Hydro-geological and Hydrological Study are completed in table format in section 3 of this report and form the screening element of this report, including:

- Surface Flow and Flooding Impact Identification
- Subterranean (groundwater) Flow Impact Identification
- Slope Stability screening flowchart

2.3 No 25 Glenmore Road is located with an arrow on the relevant Figures of the Camden Geological, Hydro-geological and Hydrological Study, appended to this report, Appendix A.

3.0 GENERAL DESCRIPTION OF PROPERTY:

3.1 No 25 Glenmore Road is a mid-terrace Victorian property. The accommodation is arranged over 4 stories, including a partial basement and a lightwell to the front

3.2 The property is located the upper slope of a residential street, which accesses Haverstock Hill to the south. The road slopes south to the Belsize Park locale.

3.3 The geological maps for the area indicate the surface geology is London Clay, cropping close to the surface. This information is supported by personal knowledge of houses in the immediate vicinity and similar reports accompanying planning applications for properties close by.

3.4 A semi-mature, deciduous tree is growing in the public footpath, approximately 5.0m from the front bay.

3.5 The form of the house is typical for houses of this type and age and typical of the style of houses in the immediate, neighbouring roads. The plan form of the house involves a main body and a closet wing. The enclosing walls are solid 13½" stock brickwork bedded in a lime mortar. Floors are timber spanning in a front to rear direction.

4.0 EXTENT OF PROPOSED WORKS:

4.1 The extent of the proposed structural works principally involves lowering and extending the existing basement beneath the rear addition closet wing of the house.

4.2 It is also proposed to reconfigure the upper floors and convert the loft space.

4.3 The scope of the proposed works is shown on ING drg. Nos. 12073-101-103, 201,202, 901, 902 in Appendix 2.

5.0 RESPONSE TO BIA SURFACE FLOW AND FLOOD IMPACT SCREENING FLOWCHARTS:

5.1	Appendix E: Camden geological, hydrological and Hydrology study: Guidance for subterranean development.	
5.2	Is the site within the catchment of the pond chains on Hampstead Heath?	No, refer to Figure 15 appended.
5.3	Is the site within the catchment of the pond chains on Hampstead Heath?	No. The ground floor side infill area is presently hard surfaced and drains into the sewer system, as will the proposed run-off from the roof.
5.4	As part of the site drainage, will surface water flows (eg rainfall and run-off) be materially changed from the existing one?	Hard surfaced areas will remain the same.
5.5	Will the proposed basement development result in a change in the proportion of hard surface/paved external areas?	The existing aggregated surface area of run-off will be unchanged.
5.6	Will the proposed basement development result in changes to the profile of the inflows (instantaneous and long-term) of surface water being received by adjacent properties or downstream watercourses?	The existing subsoil is London Clay cropping at surface. No flows of ground water will occur through this medium as it is impermeable.
5.7	Will the proposed basement development result in a change to the quality of surface water being received by adjacent properties or downstream watercourses?	Surface water drainage will be unchanged by the proposed works.

6.0 RESPONSE TO SUBTERRANEAN (GROUNDWATER) FLOW IMPACT SCREENING FLOWCHART:

6.1	Is the site located directly above an aquifer?	The site lies over London Clay, designated 'unproductive strata' on Figure 8, attached.
6.2	Will the proposed basement extend beneath the water table surface?	The upper aquifer will not be present in this case, because of the shallow depth of the out crop of the London Clay.
6.3	Is the site within 100m of a watercourse, well (used/disused) or potential spring line?	No.
6.4	Is the site within 100m of a watercourse, well (used/disused) or potential spring line?	Refer to Figure 11, appended.
6.5	Is the site within the catchment of the pond chains on Hampstead Heath?	Refer to Figure 14, appended.
6.6	Will the proposed basement development result in a change in the proportion of hard surface/paved areas?	The introduction of the lightwell to the rear will have a surface water gully at lower level.
6.7	As part of the site drainage, will more surface water (eg. rainfall and run-off) than present be discharged to the ground? (eg. via soak-aways and/or SUDS)	face water drainage remains same volume wise. London clay is not suitable for use as a soakaway.

7.0 RESPONSE TO SLOPE STABILITY SCREEN FLOWCHART:

7.1	Does the existing site include slopes, natural or manmade, greater than 7 degrees (approx 1 in 8)?	The site is relatively flat.
7.2	Will the proposed re-profiling of landscaping at site change slopes at the property boundary to more than 7 degrees (approx. 1 in 8)?	No.

7.3	Does the development of neighbouring land, including railway cutting and the like, with a slope greater than 7 degrees (approx 1 in 8)?	No.
7.4	Is the site within a wider hillsetting in which the general slope is greater than 7 degrees (approx 1 in 8)?	The Haverstock Hill area is sloping, however the local, small nature of the site suggests sloping ground is not an issue.
7.5	Is the London Clay the shallowest strata at the site?	The geological long section, viewed in relation to topographical information from an OS map, it is likely that some 30m of London Clay overlies the thinner Lambeth group.
7.6	Will any tree/s be felled as part of the proposed development and/or any works proposed within any tree protection zones where trees are to be retained?	There are no trees within the site boundary.
7.7	Is there a history of seasonal shrink-swell subsidence in the local area, and/or evidence of such effects on site?	Clay has high shrinkage potential, so it can be concluded there is a seasonal affect, however this causing subsidence without mitigating influence of trees, broken drains etc. is not thought to be a problem in this local area.
7.8	Is the site within 100m of a watercourse or potential spring line?	The nearest water course is approx. 100m away from the site and is culverted, Refer to fig.11.
7.9	Is the site within an area of previously worked ground?	There is no evidence of made ground in the immediate vicinity.
7.10	Is the site within an aquifer? If so, will the proposed basement extend beneath the water table such that dewatering may be required during construction?	No. Refer Figure 8, attached.
7.11	Is the site within 50m of Hampstead Heath?	No.
7.12	Is the site within 5m of a Highway or pedestrian right of way?	No.
7.13	Will the proposed basement significantly	The neighbours basements are

	increase the differential depth of foundations relative to neighbouring properties?	to similar depths, with any underpinning to be relatively shallow, and largely to the properties' internal walls rather than party walls. The existing foundations are either to a basement depth or are relatively deep for a property of this age.
7.14	Is the site over (or within the exclusion zone of) any tunnels eg. railway lines?	No.

8.0 SCOPING:

8.1 The screening has not highlighted any significant factors which might prejudice the extension of the existing basement at the property.

8.2 The screening does, however, indicate that further investigation in the form of trial pits will be required as part of the process of securing the party wall foundations with neighbours.

8.3 Underpinning, where required to the internal and external walls (to the lightwell) will be undertaken as per Ingealtoir specification in sections of no more than 1m. The lightwell walls will also be designed to retain an appropriate highway loading.

8.4 The site is on London Clay, a non-aquifer and as such will have no effect on subterranean water flows.

8.5 The existing basement extends the full width of the property, which with its terraced neighbours' similar basements presents the same conditions to surface flows as the slightly extended basement front and back, with no change in surface conditions.

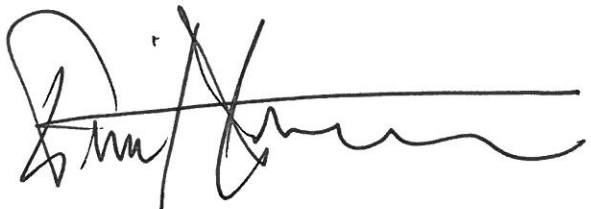
8.6 The sequential nature of the underpinning, as specified on ING drawings and Specification, beneath the existing party walls in the terrace may result in cosmetic damage to adjoining houses. The works will be carried out following the due consideration of the Party Wall Act (1996), with neighbours.

8.7 The works should be the subject of adequate supervision during the construction period. It is also recommended that a system of monitoring is put in place and regularly recorded.

8.8 In conclusion, it is considered that there are no negative impacts anticipated in this basement proposal on the hydro-geological and hydrological conditions of the local environment.

David J Warren MIStructE CEng

INGealtoir



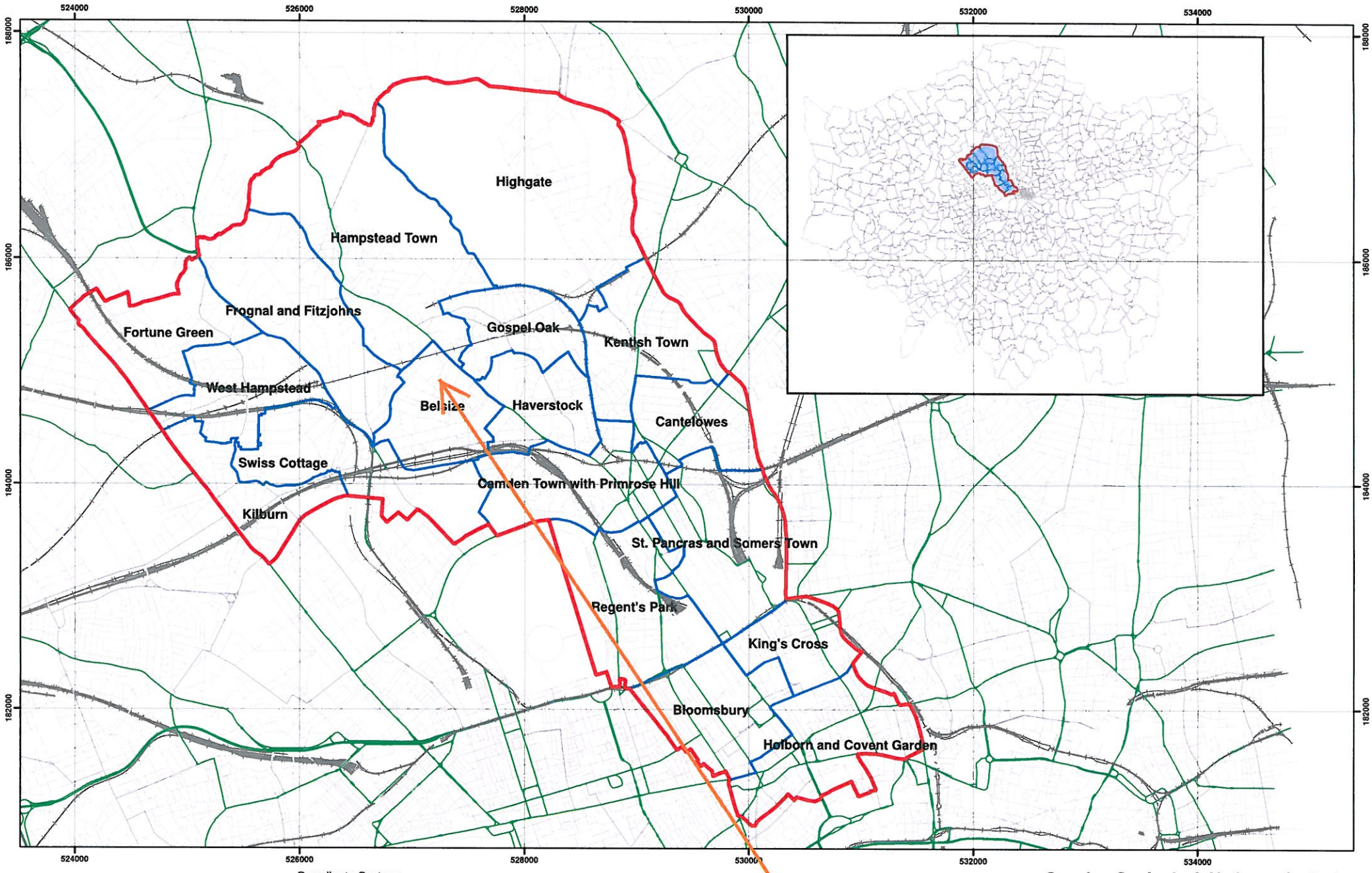
31/07/2012.

David J Warren MIStructE CEng

INGealtoir

9.0 APPENDIX 1:

FIGURES FROM CAMDEN GEOLOGICAL, HYDROGEOLOGICAL AND HYDROLOGICAL STUDY.



N

Scale at A3: 1:30,000

Coordinate System:
British National Grid
GCS_OSGB_1936

0 0.5 1 2 3
Kilometers

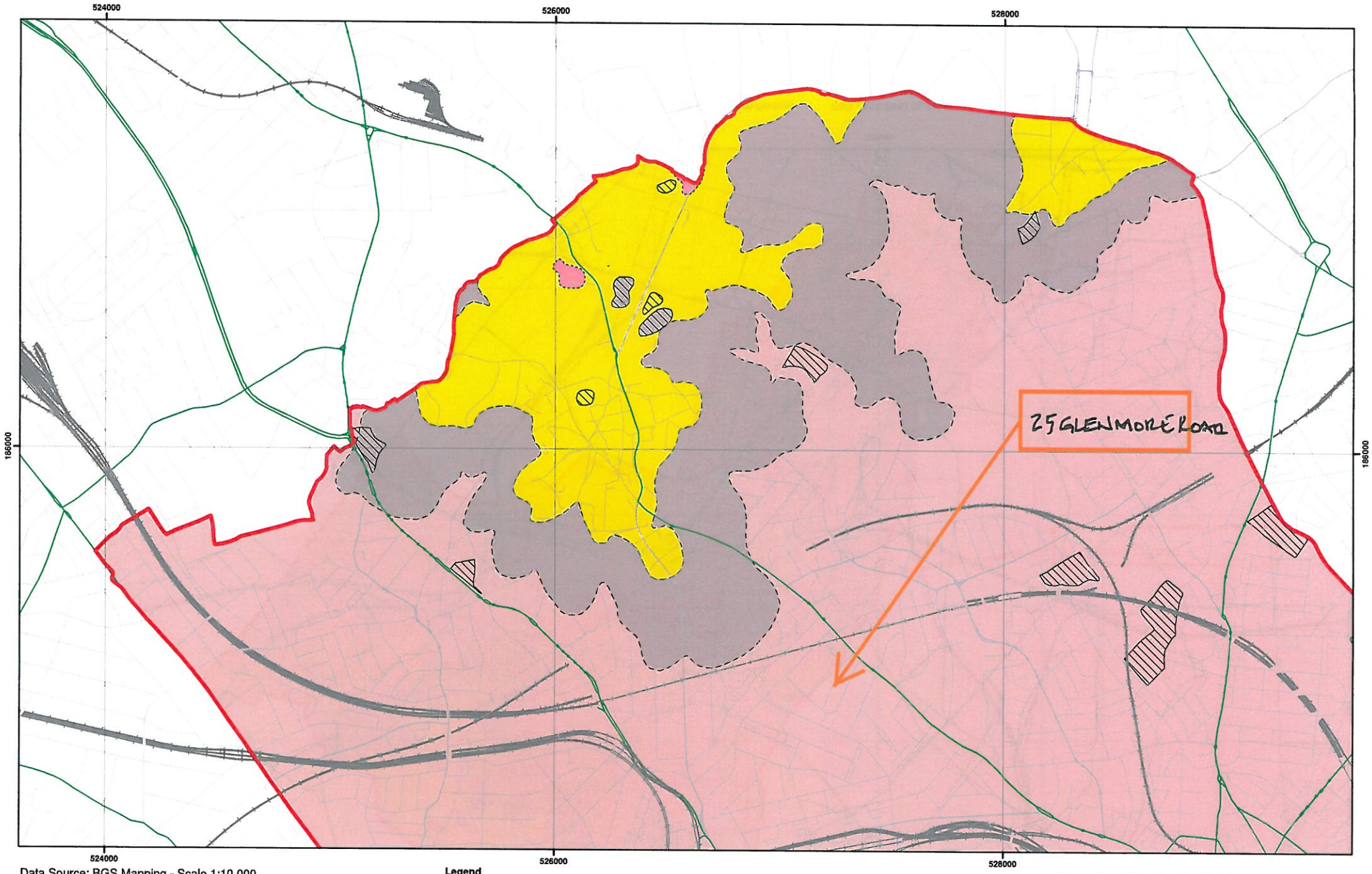
Legend

- London Borough of Camden
- Camden Wards
- Railway Lines
- A Roads

Camden Geological, Hydrogeological and Hydrological Study

Camden Administrative Boundaries

213923 FIGURE 1



Data Source: BGS Mapping - Scale 1:10,000

N

Scale at A3: 1:15,000

Coordinate System:
British National Grid
GCS_OSGB_1936

0 0.25 0.5 1 1.5
Kilometers

Legend

- London Borough of Camden
- Railway Lines
- A Roads

BGS 1:10K Artificial Ground

- MADE GROUND
- WORKED GROUND

BGS 1:10K Drift Geology

- ALLUVIUM
- HACKNEY GRAVEL FORMATION
- LANGLEY SILT FORMATION
- LYNCH HILL GRAVEL FORMATION
- STANMORE GRAVEL FORMATION

BGS 1:10K Solid Geology

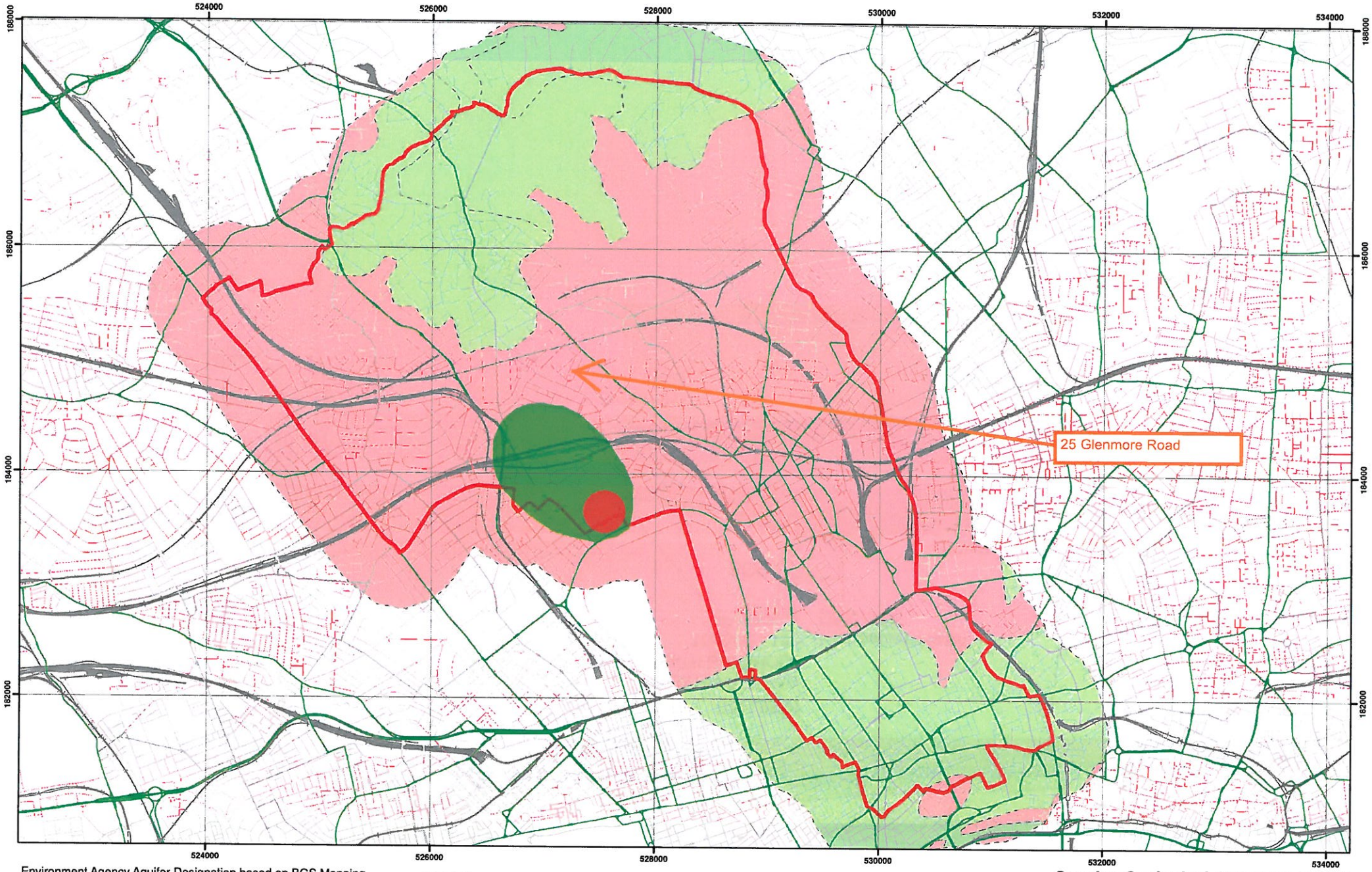
- BAGSHOT FORMATION
- CLAYGATE MEMBER
- LAMBETH GROUP
- LONDON CLAY FORMATION

NB. Geological boundaries are largely indicative based on available geological mapping data

Camden Geological, Hydrogeological and Hydrological Study

North Camden Geological Map

213923 FIGURE 4



Environment Agency Aquifer Designation based on BGS Mapping

N

Scale at A3: 1:30,000

Coordinate System:
British National Grid
GCS_OSGB_1936

0 0.5 1 2 3
Kilometers

Legend

Borough of Camden
Railway Lines
A Roads

Aquifer Designation

Secondary A Aquifer
Unproductive Strata

Source Protection Zone

Outer Source Protection Zone
Inner Source Protection Zone

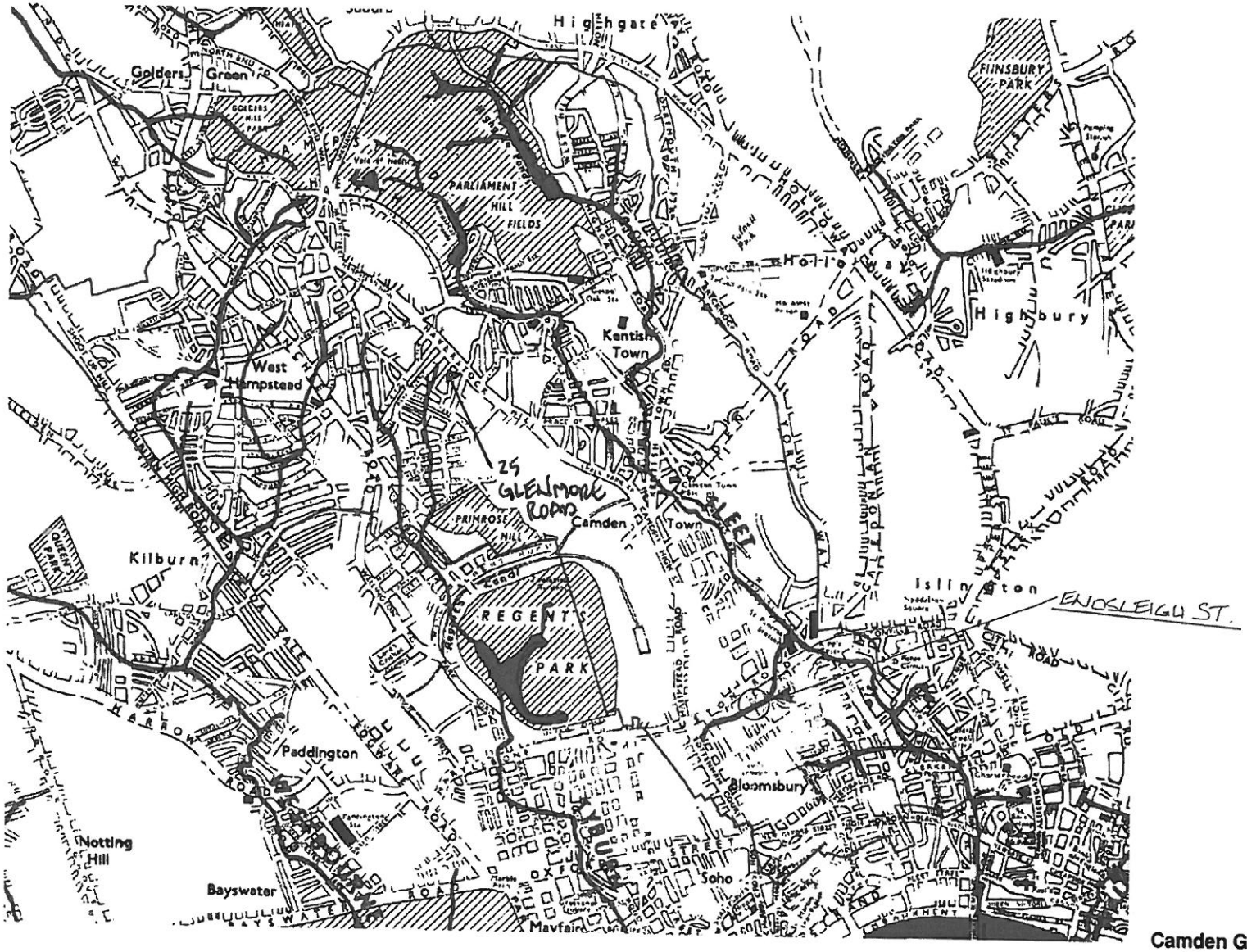
NB. Aquifer boundaries are indicative based on available geological mapping data

Camden Geological, Hydrogeological and Hydrological Study

Camden Aquifer Designation Map

213923

FIGURE 8



Source – Barton, Lost Rivers of London

Camden Geological, Hydrogeological and Hydrological Study
Watercourses

213923

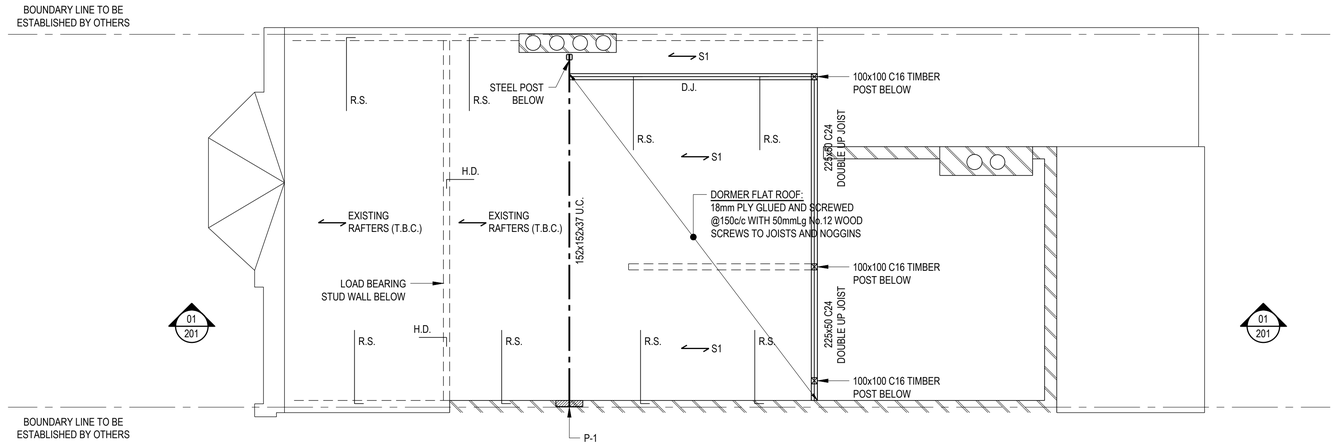
FIGURE 11

10.0 APPENDIX 2:

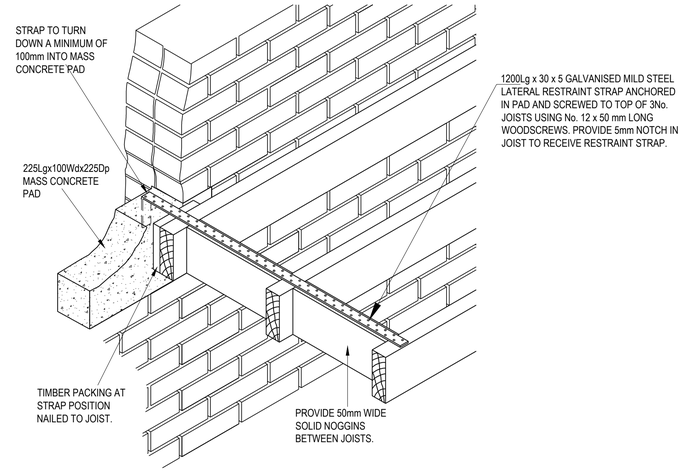
INGEALTOIR Scheme Drawings: 12073, 101-103, 201, 202, 902, 902.

DO NOT SCALE OFF THIS DRAWING

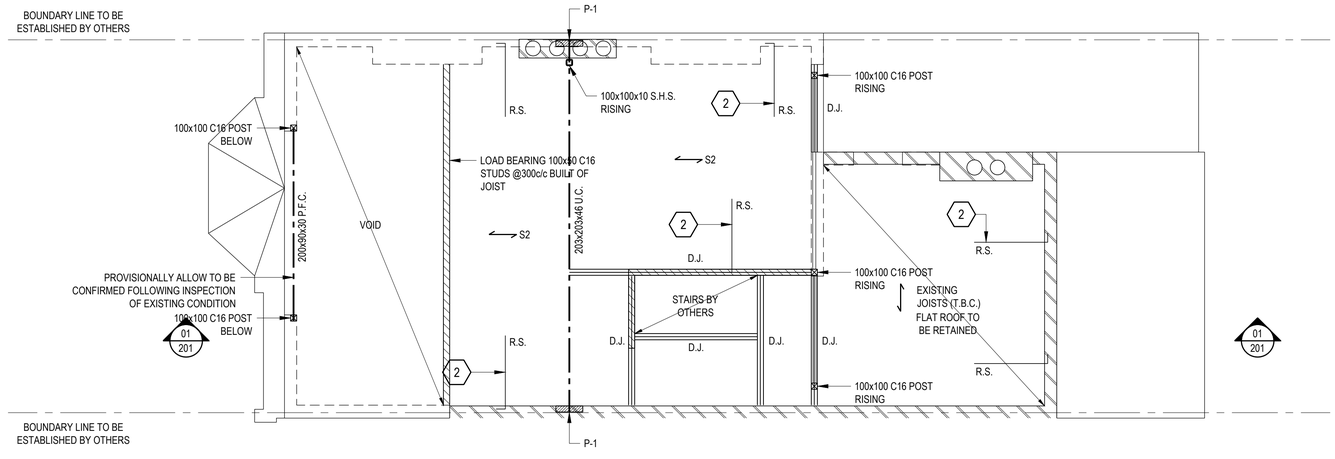
1. GENERAL:
   - 1.1. All drawings are to be read in conjunction with "INGealtoir" standard specification. We draw the Contractors particular attention to section 4 of the specification with regards to temporary works design.
   - 1.2. All setting out details / dimensions are to be provided by the Architect unless already noted on INGealtoir drawings.
   - 1.3. All waterproofing / tanking / insulation / finishes etc. are by others.
   - 1.4. All dimensions in millimeters unless stated otherwise.



R ROOF PLAN
Scale: 1:50



01 LATERAL RESTRAINT STRAPS
Scale: 1:10



3 THIRD FLOOR PLAN
Scale: 1:50

RECOMMENDED SEQUENCE OF CONSTRUCTION:

1. EXCAVATE TRIAL PITS EXPOSING PARTY WALL FOOTINGS WITH No.23 & No.27.
2. INSTALL RESTRAINT STRAPS @ THIRD, SECOND AND FIRST FLOOR.
3. CAST GROUP A UNDERPINNING, BACKFILL AGAINST PINS.
4. INSTALL TEMPORARY TRANSFER BEAMS, PROPS & NEEDLES.
5. DEMOLISH EXISTING WALLS.
6. BULK EXCAVATION OF BASEMENT.
7. CAST NEW BASEMENT SLAB & SPREADER BEAMS.
8. ERECT STEEL FRAME & STEEL BEAMS.
9. CAST NEW GROUND FLOOR SLAB.
10. REMOVE TEMPORARY WORKS MEMBERS.

MEMBER SCHEDULE

ID	MEMBER
R.S.	1200Lg "BAT" RESTRAINT STRAPS @800c/c FULLY NAILED TO TIMBER JOISTS

Rev	Date	By	Comment
-	-	-	-

INGealtóir
CONSULTING STRUCTURAL ENGINEERS
31 Oval Road
London NW1 7EA
020 7267 7540 TEL
post@ingealtoir.com EMAIL
www.ingealtoir.com WEB

Project
25 GLENMORE ROAD
LONDON, NW3

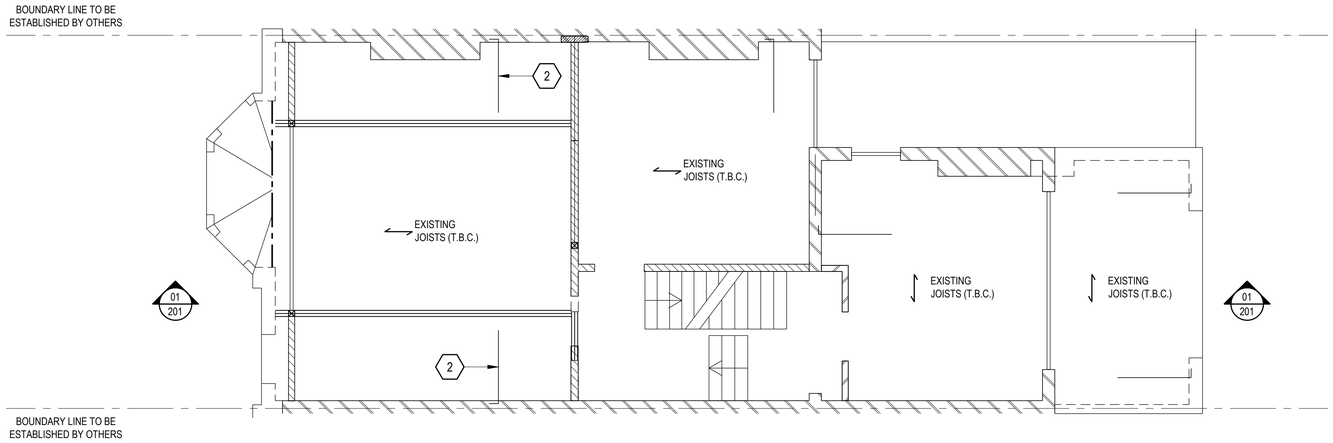
Drawing Title
TEMPORARY WORKS
THIRD FLOOR PLAN
ROOF PLAN

Scale	1:50 @ A1	Issued	
By	RP	Status	PRELIMINARY

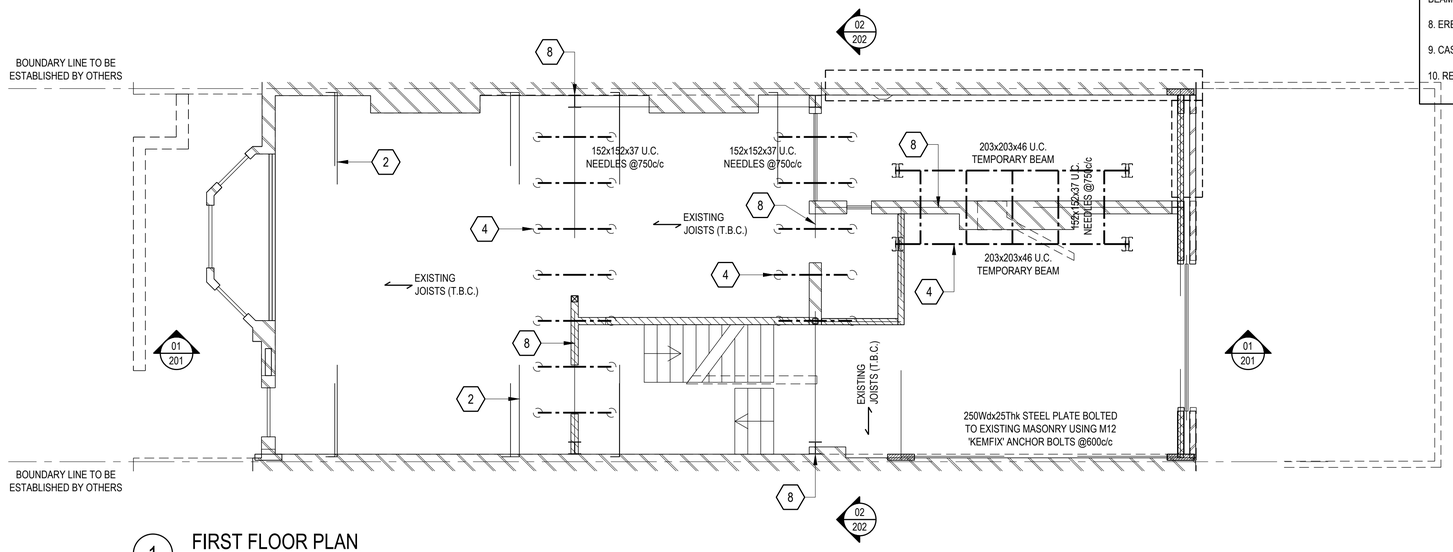
Job No.	Dwg No.	Rev
12073	903	-

DO NOT SCALE OFF THIS DRAWING

1. GENERAL:
   - 1.1. All drawings are to be read in conjunction with "INGealtoir" standard specification. We draw the Contractors particular attention to section 4 of the specification with regards to temporary works design.
   - 1.2. All setting out details / dimensions are to be provided by the Architect unless already noted on INGealtoir drawings.
   - 1.3. All waterproofing / tanking / insulation / finishes etc. are by others.
   - 1.4. All dimensions in millimeters unless stated otherwise.



2 SECOND FLOOR PLAN
Scale: 1:50



1 FIRST FLOOR PLAN
Scale: 1:50

RECOMMENDED SEQUENCE OF CONSTRUCTION:

1. EXCAVATE TRIAL PITS EXPOSING PARTY WALL FOOTINGS WITH No.23 & No.27.

2.INSTALL RESTRAINT STRAPS @ THIRD, SECOND AND FIRST FLOOR.

3. CAST GROUP A UNDERPINNING, BACKFILL AGAINST PINS.

4. INSTALL TEMPORARY TRANSFER BEAMS, PROPS & NEEDLES.

5. DEMOLISH EXISTING WALLS.

6. BULK EXCAVATION OF BASEMENT.

7. CAST NEW BASEMENT SLAB & SPREADER BEAMS.

8. ERECT STEEL FRAME & STEEL BEAMS.

9. CAST NEW GROUND FLOOR SLAB.

10. REMOVE TEMPORARY WORKS MEMBERS.

MEMBER SCHEDULE

ID	MEMBER
R.S.	1200Lg 'BAT' RESTRAINT STRAPS @800c/c FULLY NAILED TO TIMBER JOISTS

Rev	Date	By	Comment
-	-	-	-

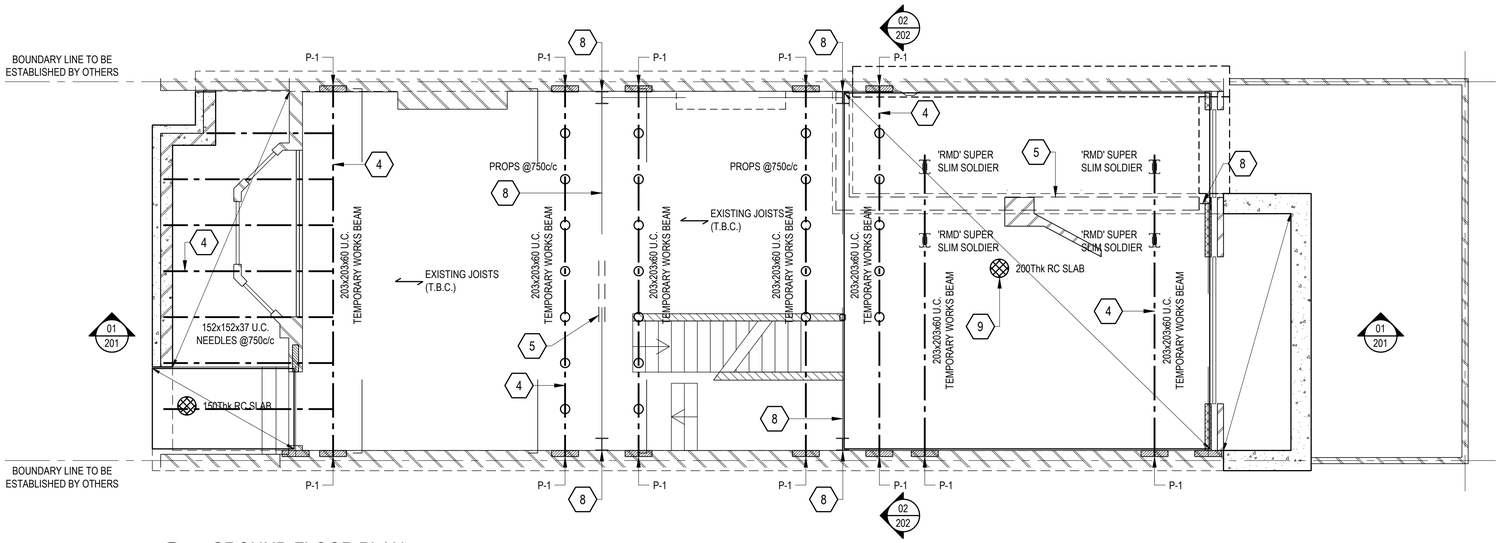
INGealtóir
CONSULTING STRUCTURAL ENGINEERS
31 Oval Road
London NW1 7EA
020 7267 7540 TEL
post@ingealtoir.com EMAIL
www.ingealtoir.com WEB

Project
25 GLENMORE ROAD
LONDON, NW3

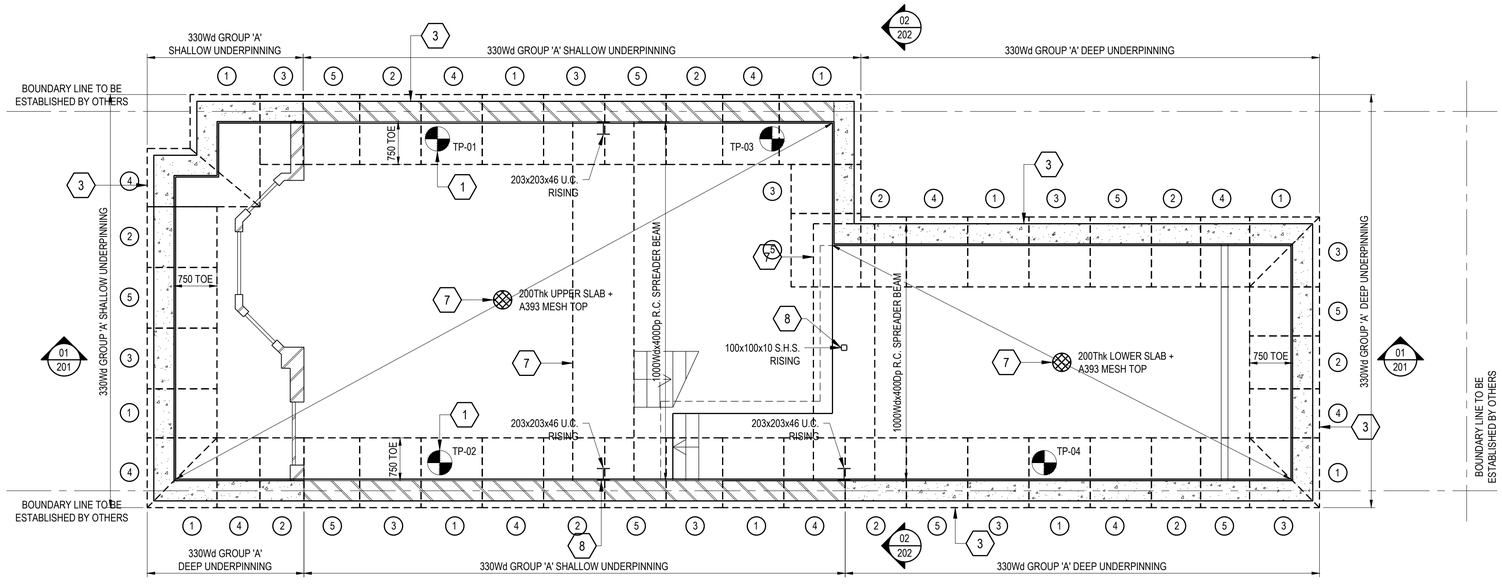
Drawing Title
TEMPORARY WORKS
FIRST FLOOR PLAN
SECOND FLOOR PLAN

Scale	1:50 @ A1	Issued	
By	RP	Status	PRELIMINARY

Job No.	Dwg No.	Rev
12073	902	-



G GROUND FLOOR PLAN
Scale: 1:50



B BASEMENT PLAN
Scale: 1:50

TRIAL PITS EXPOSING EXISTING FOUNDATIONS TO BE INSPECTED PRIOR TO DEMOLITION

INSULATION BY OTHERS WATERPROOFING BY OTHERS. DRAINAGE BY OTHERS.

ALL FOUNDATION DEPTHS TO BE CONFIRMED FOLLOWING INSPECTION OF TRIAL PITS.

RECOMMENDED SEQUENCE OF CONSTRUCTION:

1. EXCAVATE TRIAL PITS EXPOSING PARTY WALL FOOTINGS WITH No.23 & No.27.

2.INSTALL RESTRAINT STRAPS @ THIRD, SECOND AND FIRST FLOOR.

3. CAST GROUP A UNDERPINNING, BACKFILL AGAINST PINS.

4. INSTALL TEMPORARY TRANSFER BEAMS, PROPS & NEEDLES.

5. DEMOLISH EXISTING WALLS.

6. BULK EXCAVATION OF BASEMENT.

7. CAST NEW BASEMENT SLAB & SPREADER BEAMS.

8. ERECT STEEL FRAME & STEEL BEAMS.

9. CAST NEW GROUND FLOOR SLAB.

10. REMOVE TEMPORARY WORKS MEMBERS.

DO NOT SCALE OFF THIS DRAWING

1. GENERAL:
- 1.1. All drawings are to be read in conjunction with "INGealtoir" standard specification. We draw the Contractors particular attention to section 4 of the specification with regards to temporary works design.
- 1.2. All setting out details / dimensions are to be provided by the Architect unless already noted on INGealtoir drawings.
- 1.3. All waterproofing / tanking / insulation / finishes etc. are by others.
- 1.4. All dimensions in millimeters unless stated otherwise.

2. UNDERPINNING METHOD STATEMENT:

Underpinning to be carried out in accordance with ASUC Guidelines on Safe and Efficient Underpinning & Mini Piling Operations.
- 2.1. Excavate formation trench for individual pin, from floor level to underside of existing foundation and clear away spoil into skips. Width of each section generally not exceeding 1m.
- 2.2. At underside of foundation, continue excavation, and head in under wall to back of existing corbel.
- 2.3. Place poling boards and wailings to support sides of excavation as soon as possible if sub grade is unstable.
- 2.4. Remove any deleterious material and/or loose masonry from underside of footing.
- 2.5. Continue excavation to agreed formation level, placing earth works support as work proceeds and bottom out excavation.
- 2.6. Building Inspector and Engineer to inspect excavation to agree depth and satisfactory bearing capacity of formation level.
- 2.7. If areas of structure over are weak or heavily point loaded, build in sacrificial props on pre-cast pads into underpinning.
- 2.8. Immediately before concreting excavation, remove earthwork support and erect shuttering. (note: no further access is allowable into excavation after this point.)
- 2.9. Cast concrete pin to required mix to within 75mm of underside of existing foundation (concrete transported in wheelbarrows).
- 2.10. After minimum 48 hours, dry pack gap between underpinning & existing corbel with 1:3 cement/sharp sand earth damp mix rammed firmly into position.
- 2.11. PROP HEAD OF PINS IN TEMPORARY CASE.
- 2.12. Allow a minimum of 3 days between casting a pin and any adjacent excavation.

3. CONCRETE:
- 3.1. Concrete: Conform to the requirements of BS8110 and those contained in the Concrete Specification.
- 3.2. Max aggregate size 20mm
- 3.3. Concrete to be grade C40 unless stated otherwise.
- 3.4. Maximum free water / cement ratio to be 0.45
- 3.5. Min cement content to be 330kg/m³.
- 3.6. Concrete to be Class 2 sulphate resisting.

4. REINFORCEMENT:
- 4.1. Anchorage and laps of reinforcement shall be according to BS8110-1997 (3.12.8), curtailment of reinforcing bars shall be according to BS8110-1997 (3.12.10)
- 4.2. Minimum cover:
  - 4.2.1. Basement Slab - 40mm.

MEMBER SCHEDULE

ID	MEMBER
P-1	550Lgx100Wdx215Dp MASS CONCRETE PAD STONE
T.P.	TRIAL PIT EXPOSING EXISTING FOOTING

Rev	Date	By	Comment
-	-	-	-

INGealtóir
CONSULTING STRUCTURAL ENGINEERS
31 Oval Road
London NW1 7EA
020 7267 7540 TEL
post@ingealtoir.com EMAIL
www.ingealtoir.com WEB

Project
25 GLENMORE ROAD
LONDON, NW3

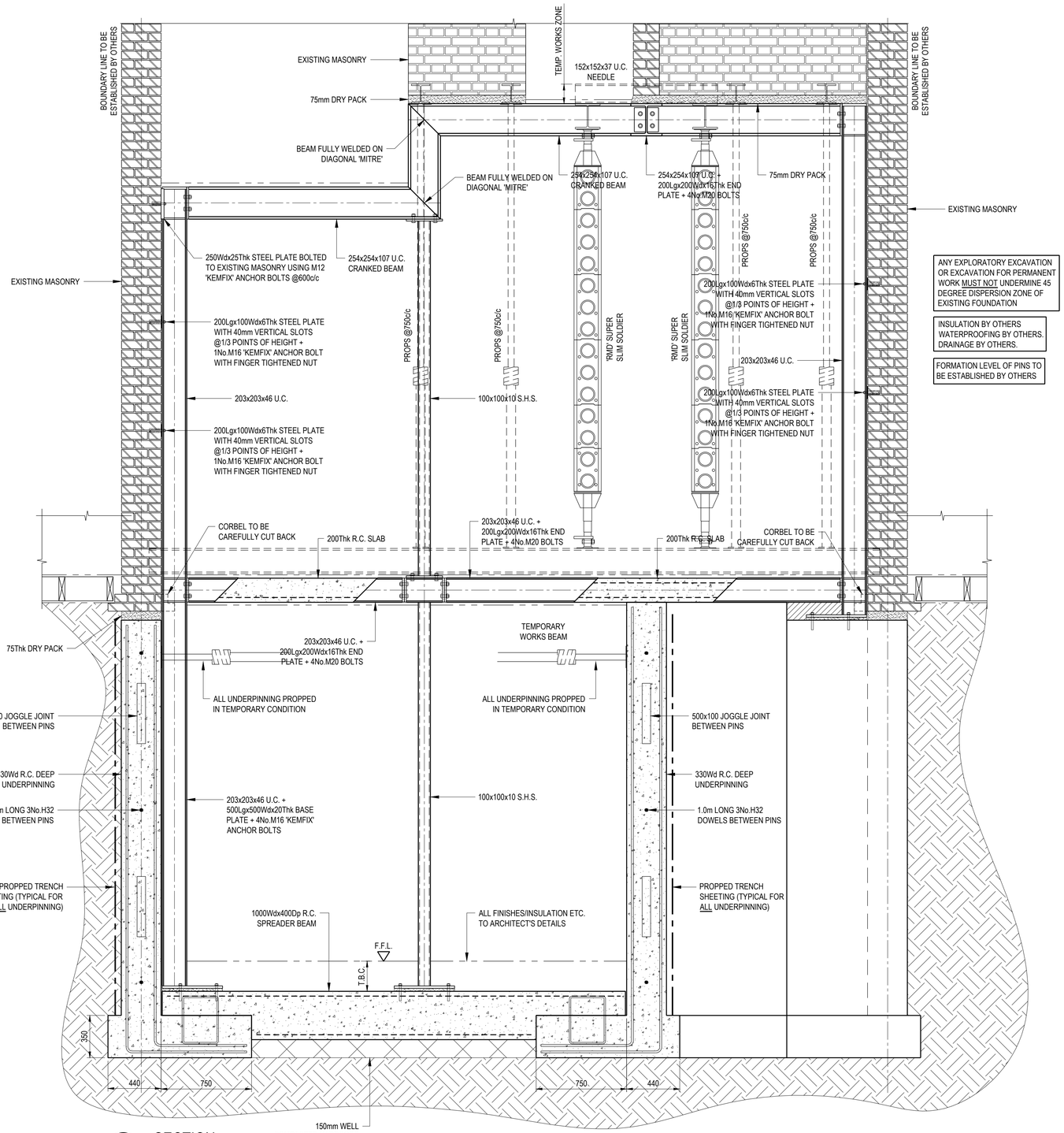
Drawing Title
TEMPORARY WORKS
BASEMENT PLAN
GROUND FLOOR PLAN

Scale	1:50 @ A1	Issued	
By	RP	Status	PRELIMINARY

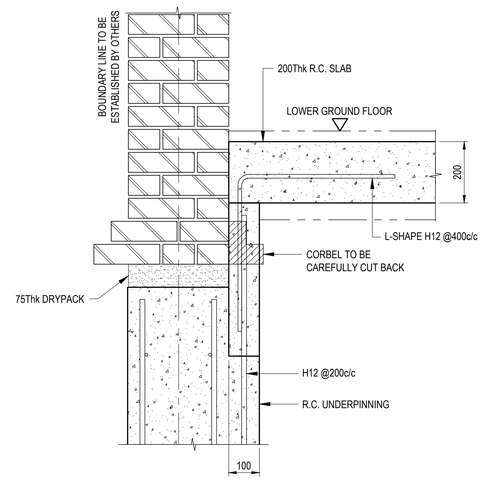
Job No.	Dwg No.	Rev
12073	901	-

DO NOT SCALE OFF THIS DRAWING

1. GENERAL:
   - 1.1. All drawings are to be read in conjunction with "INGealtoir" standard specification. We draw the Contractors particular attention to section 4 of the specification with regards to temporary works design.
   - 1.2. All setting out details / dimensions are to be provided by the Architect unless already noted on INGealtoir drawings.
   - 1.3. All waterproofing / tanking / insulation / finishes etc. are by others.
   - 1.4. All dimensions in millimeters unless stated otherwise.



02 SECTION
Scale: 1:20



UNDERPINNING/SLAB DETAIL
Scale: 1:10

Rev	Date	By	Comment
-	-	-	-

INGealtóir
CONSULTING STRUCTURAL ENGINEERS
31 Oval Road
London NW1 7EA
020 7267 7540 TEL
post@ingealtoir.com EMAIL
www.ingealtoir.com WEB

Project
25 GLENMORE ROAD
LONDON, NW3

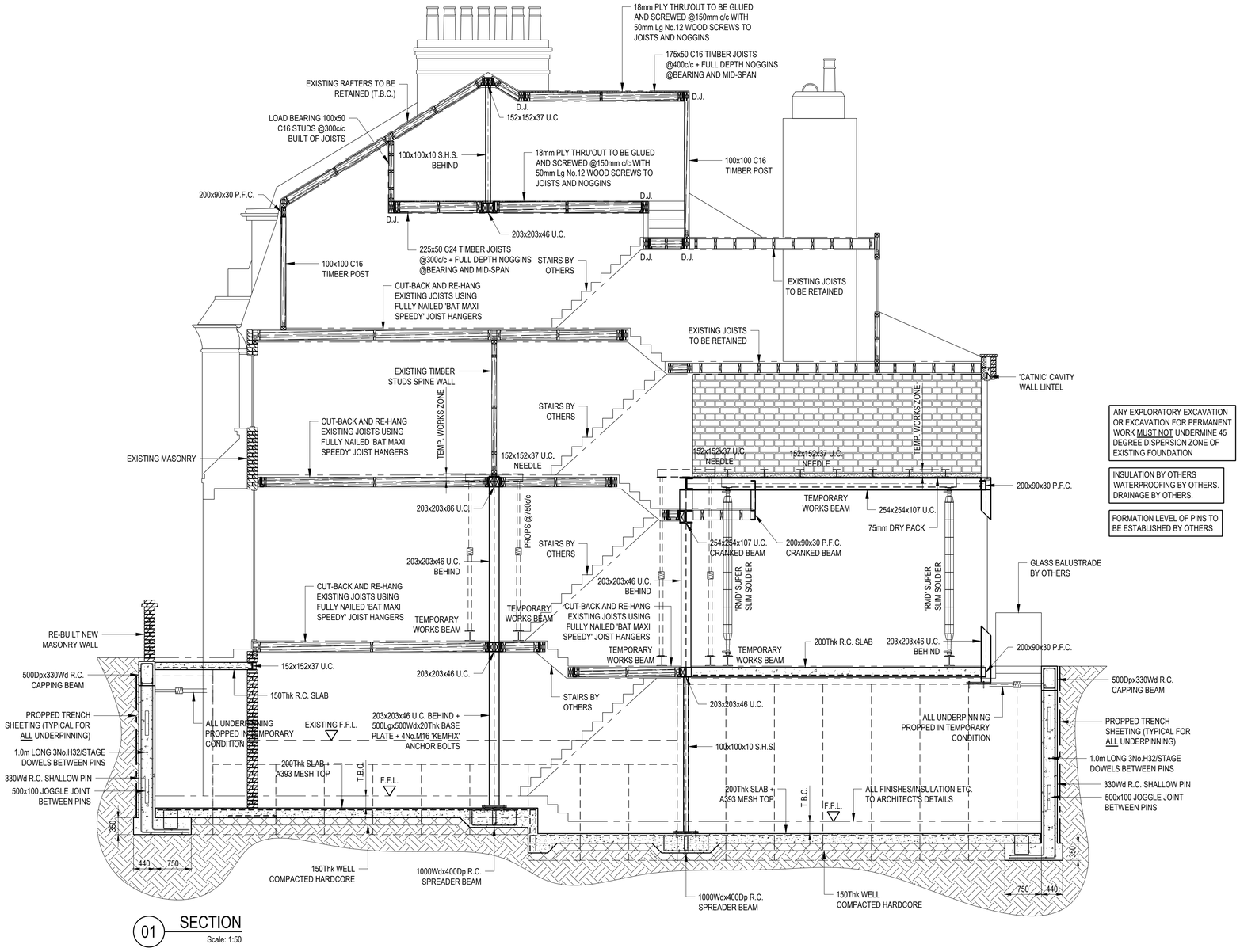
Drawing Title
SECTION 02

Scale	1:20 @ A1	Issued	
By	RP	Status	PRELIMINARY

Job No.	Dwg No.	Rev
12073	202	-

DO NOT SCALE OFF THIS DRAWING

1. GENERAL:
   - 1.1. All drawings are to be read in conjunction with "INGealtoir" standard specification. We draw the Contractors particular attention to section 4 of the specification with regards to temporary works design.
   - 1.2. All setting out details / dimensions are to be provided by the Architect unless already noted on INGealtoir drawings.
   - 1.3. All waterproofing / tanking / insulation / finishes etc. are by others.
   - 1.4. All dimensions in millimeters unless stated otherwise.



01 SECTION
Scale: 1:50

ANY EXPLORATORY EXCAVATION OR EXCAVATION FOR PERMANENT WORK MUST NOT UNDERMINE 45 DEGREE DISPERSION ZONE OF EXISTING FOUNDATION

INSULATION BY OTHERS WATERPROOFING BY OTHERS. DRAINAGE BY OTHERS.

FORMATION LEVEL OF PINS TO BE ESTABLISHED BY OTHERS

Rev	Date	By	Comment
-	-	-	-

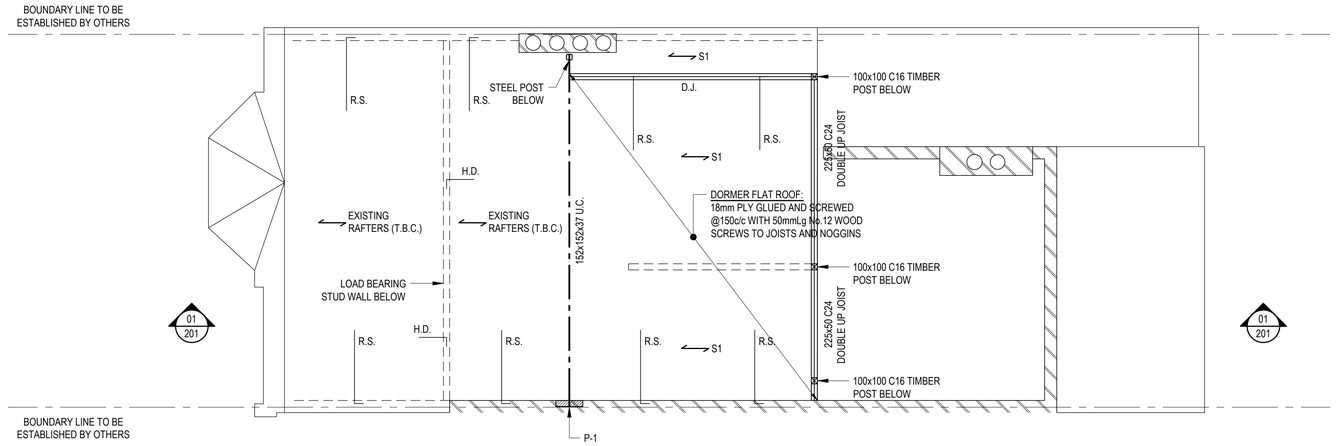
INGealtóir
CONSULTING STRUCTURAL ENGINEERS
31 Oval Road
London NW1 7EA
020 7267 7540 TEL
post@ingealtoir.com EMAIL
www.ingealtoir.com WEB

Project
25 GLENMORE ROAD
LONDON, NW3

Drawing Title
SECTION 01

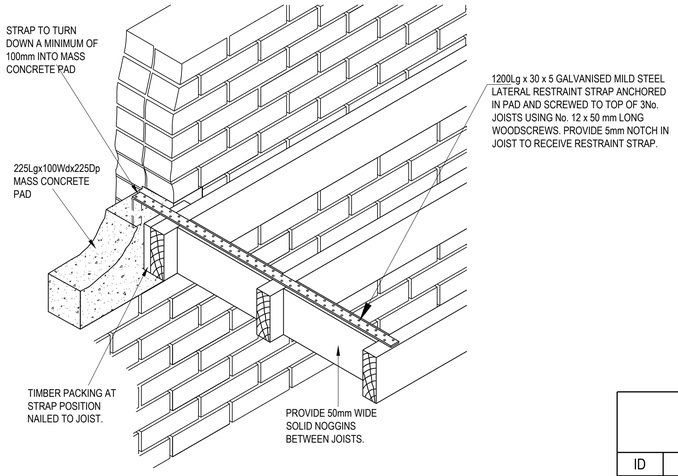
Scale	1:50 @ A1	Issued	
By	RP	Status	PRELIMINARY

Job No.	Dwg No.	Rev
12073	201	-



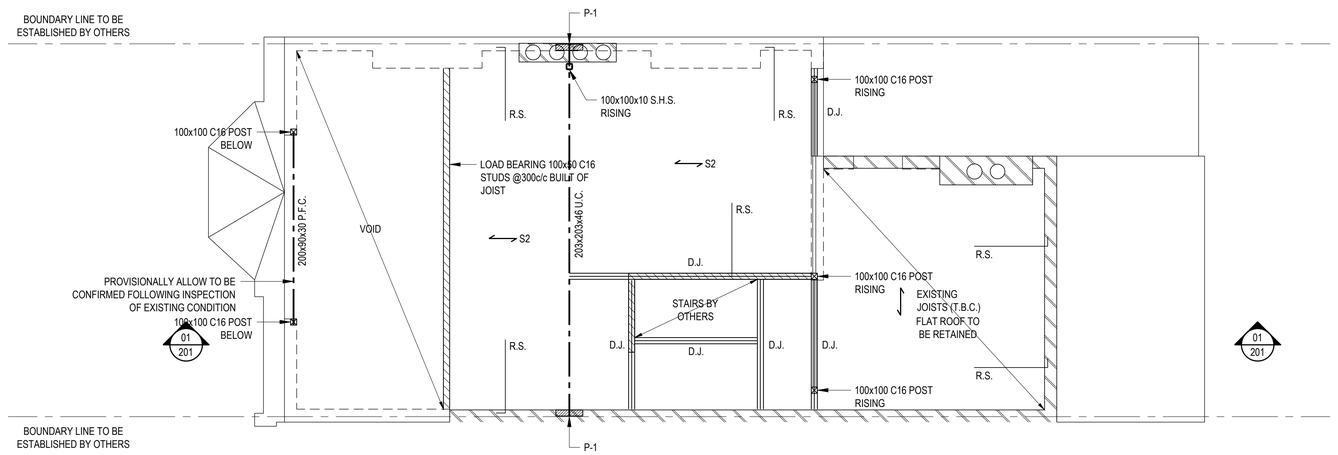
R ROOF PLAN

Scale: 1:50



01 LATERAL RESTRAINT STRAPS

Scale: 1:10



3 THIRD FLOOR PLAN

Scale: 1:50

DO NOT SCALE OFF THIS DRAWING

1. GENERAL:
   - 1.1. All drawings are to be read in conjunction with "INGealtoir" standard specification. We draw the Contractors particular attention to section 4 of the specification with regards to temporary works design.
   - 1.2. All setting out details / dimensions are to be provided by the Architect unless already noted on INGealtoir drawings.
   - 1.3. All waterproofing / tanking / insulation / finishes etc. are by others.
   - 1.4. All dimensions in millimeters unless stated otherwise.

2. MASONRY:
   - 2.1. All block work is to be 7N/mm² lightweight block. Unless stated otherwise.
   - 2.2. All below ground masonry to be frost resistant. Mortar in all below ground masonry to be designation (ii) 1:¼:4.
   - 2.3. All cavity wall ties are to be 'Halfen HTST' type stainless steel ties at 900c/c horiz & 450c/c vert. Unless stated otherwise.

3. STEEL:
   - 3.1. All steel sections are to be grade S275 to BS5950.
   - 3.2. The Contractor is responsible for maintaining the structural integrity of the steel frame during the construction phase and is to provide any necessary temporary propping to ensure stability during construction.
   - 3.3. Fire protection of structural steelwork is to the architect's details.

4. TIMBER
   - 4.1. New timber in the works is to be selected structural timber not inferior to grade C16 to BS5268: part 2, unless noted otherwise on the drawings.
   - 4.2. Joists & rafters are to be notched no greater than one fifth of overall depth.
   - 4.3. 50mm wide full depth soft wood skew nailed noggins are to be inserted at supports and mid-span of all joists & rafter spans.
   - 4.4. All timber stud partitions to be supported on doubled joists
   - 4.5. All double joists to be bolted together using M12 bolts + 51mmØ toothed plated connectors @ 500c/c.

MEMBER SCHEDULE

ID	MEMBER
S1	175x50 C16 TIMBER JOISTS @400c/c + FULL DEPTH NOGGINS @ BEARING AND MID-SPAN
S2	225x50 C24 TIMBER JOISTS @300c/c + FULL DEPTH NOGGINS @ BEARING AND MID-SPAN
P-1	440Lgx100Wdx65Dp CONCRETE PAD STONE
D.J.	DOUBLE UP JOISTS TO BE BOLTED TOGETHER USING M12 BOLTS + 75mmØ TOOTHED PLATE CONNECTORS
R.S.	1200Lg 'BAT' RESTRAINT STRAPS @800c/c FULLY NAILED TO TIMBER JOISTS
H.D.	900Lg 'BAT' H.D. STRAPS @800c/c SCREWED TO FACE OF JOIST AND PLUGGED & SCREWED TO STUDS WITH 50mm Lg No.10 SCREWS

Rev	Date	By	Comment
-	-	-	-

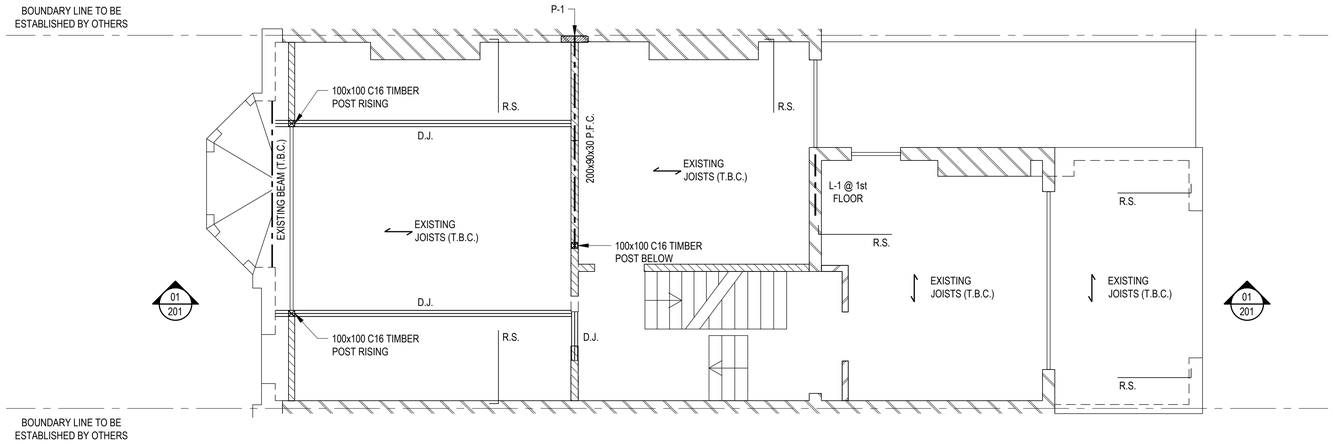
INGealtóir
CONSULTING STRUCTURAL ENGINEERS
31 Oval Road
London NW1 7EA
020 7267 7540 TEL
post@ingealtoir.com EMAIL
www.ingealtoir.com WEB

Project
25 GLENMORE ROAD
LONDON, NW3

Drawing Title
THIRD FLOOR PLAN
ROOF PLAN

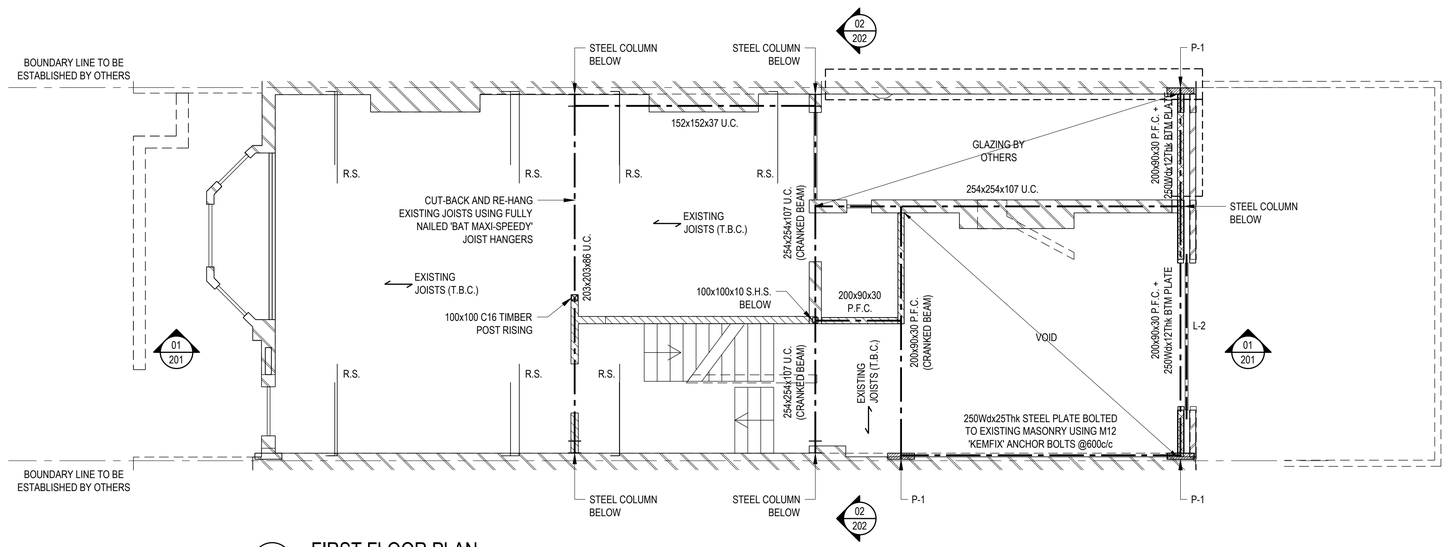
Scale	1:50 @ A1	Issued	
By	RP	Status	PRELIMINARY

Job No.	Dwg No.	Rev
12073	103	-



2 SECOND FLOOR PLAN

Scale: 1:50



1 FIRST FLOOR PLAN

Scale: 1:50

DO NOT SCALE OFF THIS DRAWING

1. GENERAL:
   - 1.1. All drawings are to be read in conjunction with "INGealtoir" standard specification. We draw the Contractors particular attention to section 4 of the specification with regards to temporary works design.
   - 1.2. All setting out details / dimensions are to be provided by the Architect unless already noted on INGealtoir drawings.
   - 1.3. All waterproofing / tanking / insulation / finishes etc. are by others.
   - 1.4. All dimensions in millimeters unless stated otherwise.

2. MASONRY:
   - 2.1. All block work is to be 7N/mm² lightweight block. Unless stated otherwise.
   - 2.2. All below ground masonry to be frost resistant. Mortar in all below ground masonry to be designation (ii) 1:¼:4.
   - 2.3. All cavity wall ties are to be 'Halfen HTST' type stainless steel ties at 900c/c horiz & 450c/c vert. Unless stated otherwise.

3. STEEL:
   - 3.1. All steel sections are to be grade S275 to BS5950.
   - 3.2. The Contractor is responsible for maintaining the structural integrity of the steel frame during the construction phase and is to provide any necessary temporary propping to ensure stability during construction.
   - 3.3. Fire protection of structural steelwork is to the architect's details.

4. TIMBER
   - 4.1. New timber in the works is to be selected structural timber not inferior to grade C16 to BS5268: part 2, unless noted otherwise on the drawings.
   - 4.2. Joists & rafters are to be notched no greater than one fifth of overall depth.
   - 4.3. 50mm wide full depth soft wood skew nailed noggins are to be inserted at supports and mid-span of all joists & rafter spans.
   - 4.4. All timber stud partitions to be supported on doubled joists
   - 4.5. All double joists to be bolted together using M12 bolts + 51mmØ toothed plated connectors @ 500c/c.

MEMBER SCHEDULE

ID	MEMBER
P-1	440Lgx100Wdx65Dp CONCRETE PAD STONE
L-1	2 x 215Dpx100Wd PCC LINTEL
L-2	CH90/100 'CATNIC' CAVITY WALL LINTEL
D.J.	DOUBLE UP JOISTS TO BE BOLTED TOGETHER USING M12 BOLTS + 75mmØ TOOTHED PLATE CONNECTORS
R.S.	1200Lg 'BAT' RESTRAINT STRAPS @800c/c FULLY NAILED TO TIMBER JOISTS

Rev	Date	By	Comment
-	-	-	-

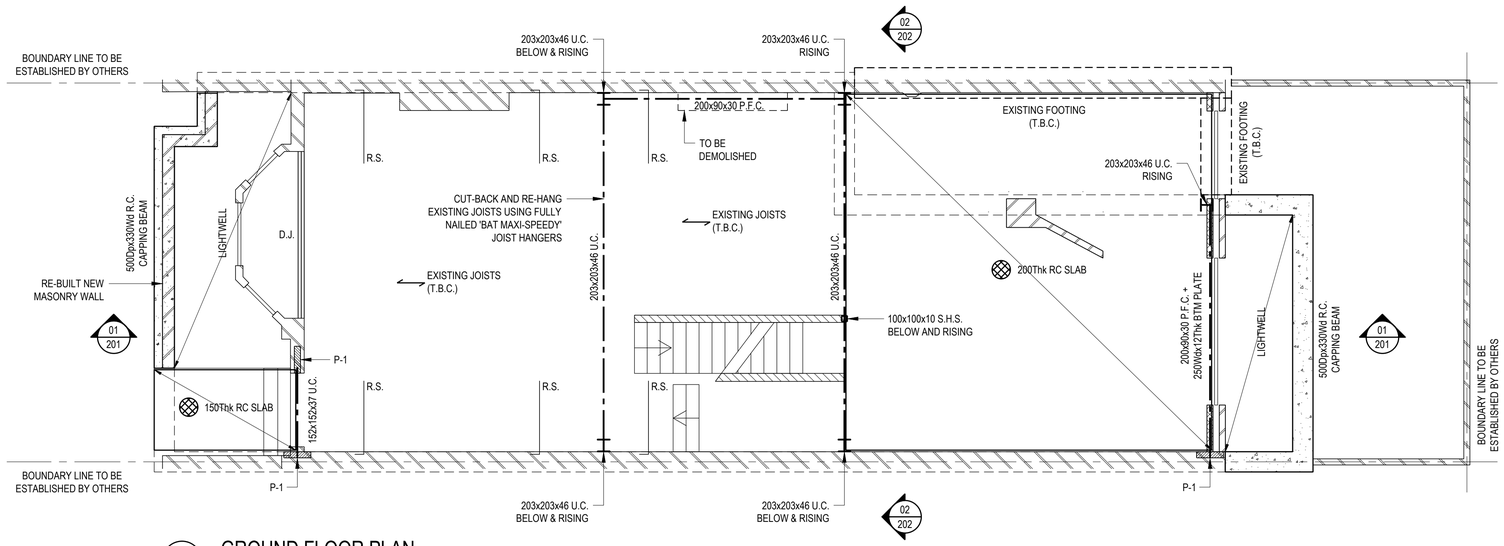
INGealtóir
CONSULTING STRUCTURAL ENGINEERS
31 Oval Road
London NW1 7EA
020 7267 7540 TEL
post@ingealtoir.com EMAIL
www.ingealtoir.com WEB

Project
25 GLENMORE ROAD
LONDON, NW3

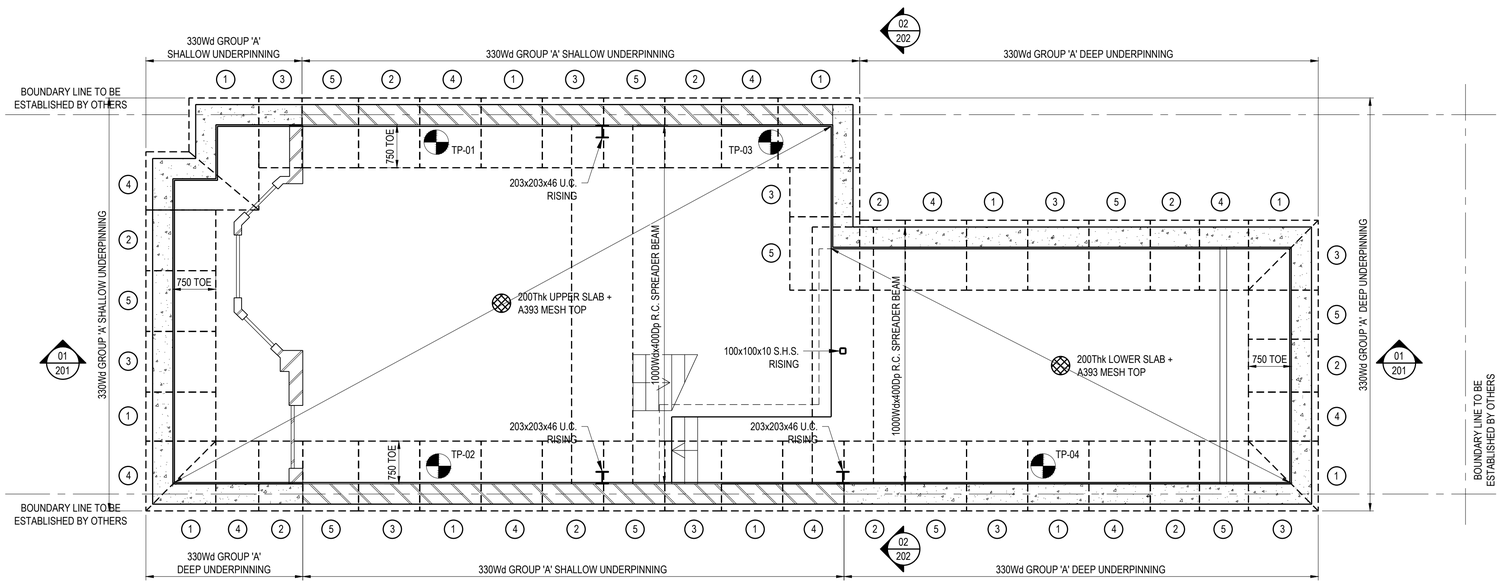
Drawing Title
FIRST FLOOR PLAN
SECOND FLOOR PLAN

Scale	1:50 @ A1	Issued	
By	RP	Status	PRELIMINARY

Job No.	Dwg No.	Rev
12073	102	-



G GROUND FLOOR PLAN
Scale: 1:50



B BASEMENT PLAN
Scale: 1:50

TRIAL PITS EXPOSING EXISTING FOUNDATIONS TO BE INSPECTED PRIOR TO DEMOLITION

INSULATION BY OTHERS WATERPROOFING BY OTHERS. DRAINAGE BY OTHERS.

ALL FOUNDATION DEPTHS TO BE CONFIRMED FOLLOWING INSPECTION OF TRIAL PITS.

DO NOT SCALE OFF THIS DRAWING

1. GENERAL:
- 1.1. All drawings are to be read in conjunction with "INGealtoir" standard specification. We draw the Contractors particular attention to section 4 of the specification with regards to temporary works design.
- 1.2. All setting out details / dimensions are to be provided by the Architect unless already noted on INGealtoir drawings.
- 1.3. All waterproofing / tanking / insulation / finishes etc. are by others.
- 1.4. All dimensions in millimeters unless stated otherwise.

2. UNDERPINNING METHOD STATEMENT:

Underpinning to be carried out in accordance with ASUC Guidelines on Safe and Efficient Underpinning & Mini Piling Operations.
- 2.1. Excavate formation trench for individual pin, from floor level to underside of existing foundation and clear away spoil into skips. Width of each section generally not exceeding 1m.
- 2.2. At underside of foundation, continue excavation, and head in under wall to back of existing corbel.
- 2.3. Place poling boards and wailings to support sides of excavation as soon as possible if sub grade is unstable.
- 2.4. Remove any deleterious material and/or loose masonry from underside of footing.
- 2.5. Continue excavation to agreed formation level, placing earth works support as work proceeds and bottom out excavation.
- 2.6. Building Inspector and Engineer to inspect excavation to agree depth and satisfactory bearing capacity of formation level.
- 2.7. If areas of structure over are weak or heavily point loaded, build in sacrificial props on pre-cast pads into underpinning.
- 2.8. Immediately before concreting excavation, remove earthwork support and erect shuttering. (note: no further access is allowable into excavation after this point.)
- 2.9. Cast concrete pin to required mix to within 75mm of underside of existing foundation (concrete transported in wheelbarrows).
- 2.10. After minimum 48 hours, dry pack gap between underpinning & existing corbel with 1:3 cement/sharp sand earth damp mix rammed firmly into position.
- 2.11. PROP HEAD OF PINS IN TEMPORARY CASE.
- 2.12. Allow a minimum of 3 days between casting a pin and any adjacent excavation.

3. CONCRETE:
- 3.1. Concrete: Conform to the requirements of BS8110 and those contained in the Concrete Specification.
- 3.2. Max aggregate size 20mm
- 3.3. Concrete to be grade C40 unless stated otherwise.
- 3.4. Maximum free water / cement ratio to be 0.45
- 3.5. Min cement content to be 330kg/m³.
- 3.6. Concrete to be Class 2 sulphate resisting.

4. REINFORCEMENT:
- 4.1. Anchorage and laps of reinforcement shall be according to BS8110-1997 (3.12.8), curtailment of reinforcing bars shall be according to BS8110-1997 (3.12.10)
- 4.2. Minimum cover:
  - 4.2.1. Basement Slab - 40mm.

5. MASONRY:
- 5.1. All block work is to be 7N/mm² lightweight block. Unless stated otherwise.
- 5.2. All below ground masonry to be frost resistant. Mortar in all below ground masonry to be designation (ii) 1:¼:4.
- 5.3. All cavity wall ties are to be 'Halfen HTST' type stainless steel ties at 900c/c horiz & 450c/c vert. Unless stated otherwise.

6. STEEL:
- 6.1. All steel sections are to be grade S275 to BS5950.
- 6.2. The Contractor is responsible for maintaining the structural integrity of the steel frame during the construction phase and is to provide any necessary temporary propping to ensure stability during construction.
- 6.3. Fire protection of structural steelwork is to the architect's details.

7. TIMBER
- 7.1. New timber in the works is to be selected structural timber not inferior to grade C16 to BS5268: part 2, unless noted otherwise on the drawings.
- 7.2. Joists & rafters are to be notched no greater than one fifth of overall depth.
- 7.3. 50mm wide full depth soft wood skew nailed noggins are to be inserted at supports and mid-span of all joists & rafter spans.
- 7.4. All timber stud partitions to be supported on doubled joists
- 7.5. All double joists to be bolted together using M12 bolts + 51mmØ toothed plated connectors @ 500c/c.

MEMBER SCHEDULE

ID	MEMBER
P-1	440Lgx100Wdx65Dp MASS CONCRETE PAD STONE
R.S.	1200Lg 'BAT' RESTRAINT STRAPS @800c/c FULLY NAILED TO TIMBER JOISTS
T.P.	TRIAL PIT EXPOSING EXISTING FOOTING

Rev	Date	By	Comment
-	-	-	-

INGealtóir
CONSULTING STRUCTURAL ENGINEERS
31 Oval Road
London NW1 7EA
020 7267 7540 TEL
post@ingealtoir.com EMAIL
www.ingealtoir.com WEB

Project
25 GLENMORE ROAD
LONDON, NW3

Drawing Title
BASEMENT PLAN
GROUND FLOOR PLAN

Scale	1:50 @ A1	Issued	
By	RP	Status	PRELIMINARY

Job No.	Dwg No.	Rev
12073	101	-