
108-110 Colney Hatch Lane

London

N10 1EA

Proposed Basement – Structural Methodology & Impact Statement

Job
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1. Introduction

The site of 108-110 Colney Hatch Lane, N10 1EA is located in the London borough of Haringey in north London. The client, XP Property, have developed proposals to extend and refurbish the existing residential buildings on the site including the creation of a single storey basement level under each property.

The purpose of this report is to outline the structural alterations required to facilitate the construction of the basement and how the site constraints have been considered within the design. This includes a description of the recommended construction methodology and how construction impacts on the surrounding area have been minimised through the selection of appropriate processes.

This report has been produced in support of the planning application submitted by XP Property for this site and should not be relied upon or used for any other purpose or by any other third party without the express permission of the engineer.

2. Existing site and property

108-110, Colney Hatch Lane is located to the north of Muswell Hill. The site is accessed off Colney Hatch Lane to the west and is bounded by adjacent residential sites to the north and south. The rear garden is located on the east side of the site and is bounded by neighbouring residential gardens. The site is sloped from east to west (downhill) with a lesser incline north (downhill) to south.



Figure 1 Site Plan

The neighbouring properties, 106 and 112 Colney Hatch Lane, are approximately 0.8m higher and lower in ground level respectively (measured from the nearest adjacent wall).



Figure 2 - 3D view illustrating level change from front to rear

Two adjoining semi-detached properties occupy the site of No. 108 and 110 with a party wall separating the buildings. Both buildings are private residential properties, 3 storeys in height including a habitable level within the roof space.

The buildings are of traditional construction with load bearing masonry walls supporting timber floor and roof structure. The foundations typically consist of corbelled brickwork, or mass concrete strip footings. (Refer to Section 4 for further details).

Both properties appear to have extensions added as part of historical works. To the front, bay windows have been added where the original front porch would have been located. To the rear, the space between the original rear addition has been infilled with a two storey extension.



Figure 3 - Front elevation

3. Desk study

3.1. British geological Survey (BGS) records

BGS records indicate that the site is underlain predominantly by London Clay but superficial deposits of Dollis Hill Sands and gravels may be present upslope in the direction of the rear garden.

Local borehole records typically prove London Clay to depth with no ground water tables noted due to the presence of the impermeable London Clay. Any groundwater is therefore expected to consist of perched water running over the top of the clay rather than any standing water table.

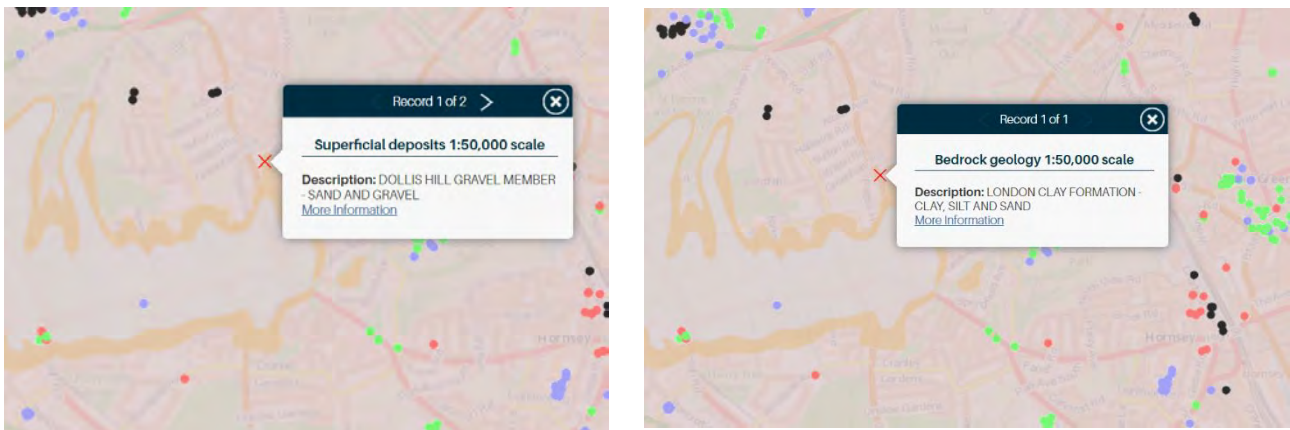


Figure 4 - BGS – Superficial deposits and Bedrock Geology in the vicinity of the site

3.2. Flood Risk

Flood risk maps obtained from the government Flood Risk service show the site to be at low flood risk from rivers and watercourses. The site also has a very low risk of surface water flooding and is approximately 2m higher than the adjacent road of Colney Hatch Lane which is noted to have a low risk of surface water flooding.

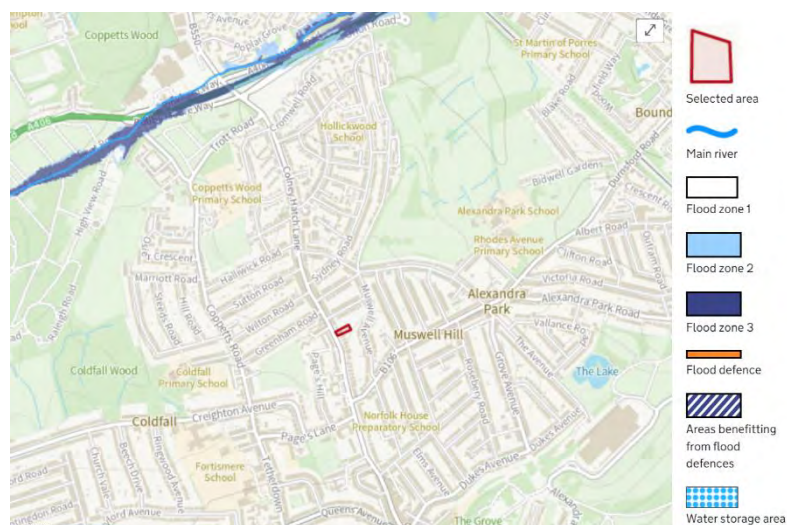


Figure 5 - Site flood risk from rivers and watercourse

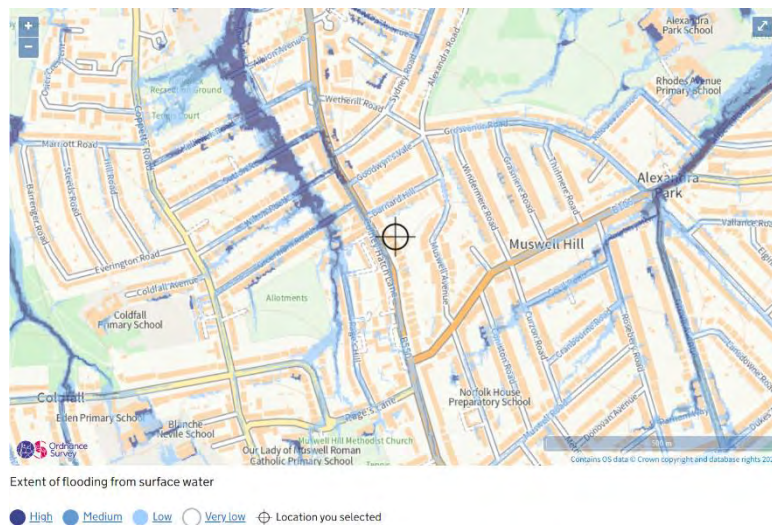


Figure 6 - Site flood risk from Surface water

3.3. Unexploded ordnance (UXO)

Unexploded bomb risk maps obtained from Zenica indicate the site is in a low risk area for UXOs

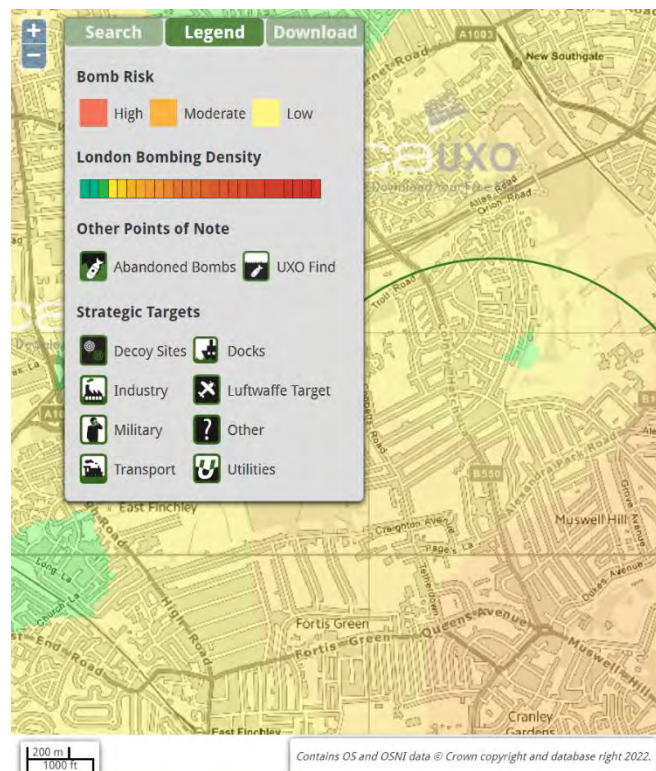


Figure 7 - Low risk of UXOs

3.4. Infrastructure

The site is not in the presence of any overground or underground rail transport links or stations.

Colney Hatch Lane is the only road adjacent the site and is classed as a B road and is approximately 6m away from the proposed building line.

3.5. Trees

No trees with Root Protection Areas (RPAs) or Tree Preservation Orders (TPOs) are understood to be located either on the site or in the near vicinity.

4. Site investigation & ground conditions

A site investigation was undertaken in September 2022 consisting of trial pits around the perimeter of the existing buildings. The trial pits were requested to confirm the depth of London clay as it is well understood that this continues unchanged to depth.

As noted in section 2, the trial pits confirmed that the existing building footings consist of the original corbelled masonry or mass concrete strip footings where the building has historically been extended. The formation level of the original footings is generally 350mm below external ground level and for the more modern concrete footings this depth is increased to 600mm.

London clay was confirmed at the base of all trial pits, although this became more gravelly towards the rear garden which aligns with expectations based on the BGS records noted in Section 3.1.

All trial pits were dry and no groundwater was encountered.



Figure 8 - Typical existing foundation

5. Basement proposals & structural design philosophy

Above ground, the development consists of the extension and refurbishment of the existing buildings on the site. The internal layouts are to be fully reconfigured and therefore any load bearing internal structure will be replaced with a combination of load bearing walls or steel framing.

The below ground proposals consist of the addition of a single storey basement level which matches the full width of the existing structure above ground. However, the basement only extends approximately 2/3 of the building length from the front to rear of the site due to the significant rise in ground levels towards the garden.

Due to the nature of the sloping site, the basement formation level will be approximately 1.9m below ground level along the front of the property but 3.4m to the rear.

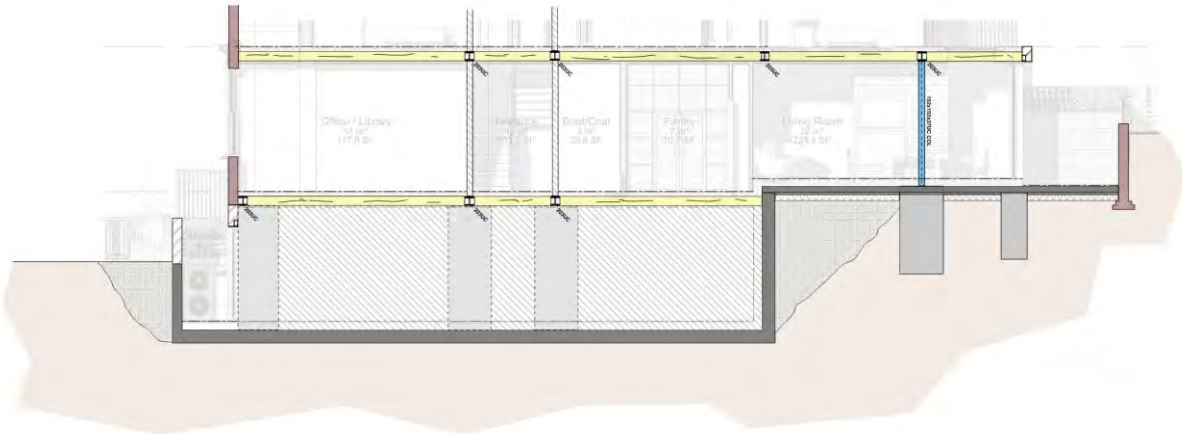


Figure 9 - Basement Section - Front to rear

Lightwells serving the basement are located along the full length of the front elevation and isolated lightwells are also located along the side elevations to the north and south.

The existing external side elevations and internal party wall will generally be retained and will therefore require underpinning to extend the foundations down to the new formation level of the basement. The underpinning will be undertaken in a carefully controlled sequence to ensure the structural integrity is retained during the works. This is discussed further in Section 6. The rear elevation will be fully demolished and rebuilt, allowing a more conventional bottom-up construction methodology to be adopted.

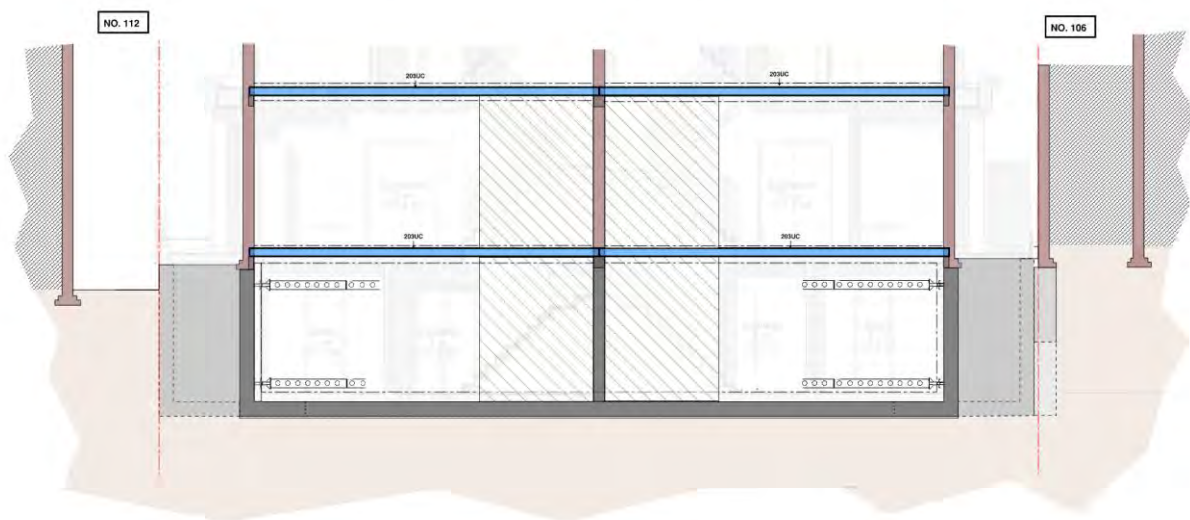


Figure 10 – Basement Section – Side to Side

The presence of a lightwell along the front elevation means that the extension of the front façade to basement level will be exposed once the works are completed. Concrete underpins therefore provide an inappropriate finish to the new basement wall and an alternative strategy is proposed. Prior to excavation of the basement commencing, the front elevation will be supported on steel temporary structure. Once the excavation is complete, the lightwell wall may be constructed in exposed, facing brickwork to match the elevation above.

All basement perimeter walls (continuous lightwell walls to the east and west and underpinned flank walls to the north and south) will be constructed from reinforced concrete (RC) and will be designed for soil pressures, hydrostatic forces and surcharges from adjacent land uses (existing buildings and vehicles). Where possible, basement walls will be designed to be propped by the new ground floor slab to enable the structural design to be as efficient as possible.

The basement foundation will consist of a full raft slab designed to distribute the building loads and retaining wall lateral loads across the full building footprint, ensuring bearing pressures (and resultant ground movements and settlements) are minimised. The raft slab will also be designed for heave and hydrostatic forces associated with the underlying London Clays.

The proposed structure for the basement is further illustrated in the drawings provided in Appendix A.

6. Drainage

The existing below ground drainage network serving the property drains out to Thames Water sewers located in Colney Hatch Lane. The proposals will not change the existing drainage principles for above ground foul water discharge which will continue to drain via gravity to the Thames Water sewer.

The proposed drainage serving the basement will be below the level of the Thames Water outfall and will therefore need to be pumped via rising mains. The pumped system will also protect the proposed basement against any potential surcharges from the Thames Water sewer.

7. Basement waterproofing

The proposed basement will be designed to achieve a Grade 3 level of waterproofing protection as outlined in BS 8102:2009.

This will typically consist of a primary tanking barrier applied to the internal face of the structure (masonry, mass concrete and reinforced concrete) followed by a secondary barrier in the form of a cavity drainage system with associated pump systems connecting to the public sewer network.

The final waterproofing system will be dependent on the chosen supplier/designer.

8. Party wall matters

The proposed development works fall within the scope of the Party Walls Act 1996. Procedures under the Act will be dealt with in full by the Employer's Party Wall Surveyor. The Party Wall Surveyor will prepare and serve necessary Notices under the provisions of the Act and agree on Party Wall awards in the event of disputes. The Contractor will be required to provide the Party Wall Surveyor with appropriate drawings, method statements and other relevant information covering the works that are notable under the Act. The resolution of matters under the Act and provisions of the Party Wall Awards will protect the interests of all owners.

The designs for 108-110 Colney Hatch Lane will be developed so as not to preclude or inhibit similar, or indeed any, works on the adjoining properties. This will be verified by the Surveyors as part of the process under the Act.

9. Hydrogeological Impacts

The existing building at 108-100 Colney Hatch Lane is founded within London Clays in which no stationary ground water table was identified in the site investigations. Due to the extremely low permeability of the London Clay, extending the basement down further into this layer will not have a material effect on the local groundwater flows or upper aquifer. In addition, the impact of subterranean development, particularly on standalone sites, is recognised to be negligible as the groundwater will typically travel around the sides of the basement.

As the proposed basement footprint is almost fully under the existing building footprint or areas of existing hardstanding finishes, the risk of flooding will not be increased by this development.

10. Ground movements

The proposed structural works have been designed and sequenced to ensure that the movement of existing structures both on and adjacent to the site are mitigated and limited to generally accepted values.

Underpinning works to the existing building, if executed correctly in a controlled sequence, will cause limited movement to the retained structure above. The works as a whole will not exceed Damage Category 1 on the Burland damage scale which is a generally accepted limit by Party Wall surveyors which will be written into the relevant Awards.

The level difference due to the natural slope of the site means that the foundations of No. 112 Colney Hatch Lane will be a minimum of 1m below those of No. 100. This level difference along with the distance between the two buildings provided by the side alleys will help limit potential ground movements caused by the underpinning works.

Mass concrete underpins are proposed to the flank wall of 106 Colney Hatch Lane where the proposed southern lightwell is to be constructed alongside the side elevation. The mass concrete underpins will ensure that the excavation of the lightwell minimises disturbance of the soil underlying the footings of No. 106 and also that surcharge loads applied to the RC retaining wall in front of the underpins are limited.

The RC underpins and retaining walls have been designed to limit any potential lateral movement to less than 10mm.

11. Construction methodology

11.1. Construction generally

It is assumed that the above measures and assumed sequence of works are taken into account in the eventual design and construction of the proposed works.

Detailed method statements and calculations for the enabling and temporary works will need to be prepared by the Contractor for comment by all relevant parties including Party Wall Surveyors and their Engineers.

The client team will ensure that the contractor has adequate supervision and monitoring provided throughout the works particularly during the excavation and demolition stages. To this end, inspections will be carried out at key stages by the appointed structural engineer to monitor that the works are being carried out generally in accordance with the structural engineering design and specification. A written site report will be provided to the design team, Contractor and Party Wall Surveyor.

Access onto the site will likely be from Colney Hatch Lane and must be coordinated in a sensible manner to minimise disruption to the adjoining residents and provide a safe working environment.

11.2. Construction sequence

A written summary of the assumed sequence of construction is included below; drawings summarising this are also included within Appendix C.

It should be noted that the final construction sequence will be determined by the appointed contractor.

Stage 1: Site set-up, Internal soft strip & demolition

- Erect a fully enclosed painted plywood site hoarding along the site perimeter, this should not impede on the neighbouring properties.
- The services within the site should be identified and isolated as necessary.
- All below ground obstructions should also be removed to allow the works to progress.
- The principles for the removal of spoil shall be agreed. Given the scope of the works, it is likely that mini excavators in conjunction with conveyors will be used to move the spoil from within the building to a holding skip located in the front of the site in the large driveway. Grab lorries will be used to remove the material from the skip.
- Monitoring points should be installed to all neighbouring structures and a base reading should be taken prior to any construction works starting on the site.
- The soft strip of internal finishes within the building should be fully completed before commencing any structural works so that the arrangement and condition of the existing structure can be fully assessed against the current design.
- Install new steel superstructure to support the floors above and to enable the (now redundant) internal load bearing structure to be carefully demolished:

- Install new pad footings and steel framing to the rear elevation to enable the existing wall at ground floor to be demolished. Pad footings are to be installed to a sufficient depth so as not to be affected by basement excavations.

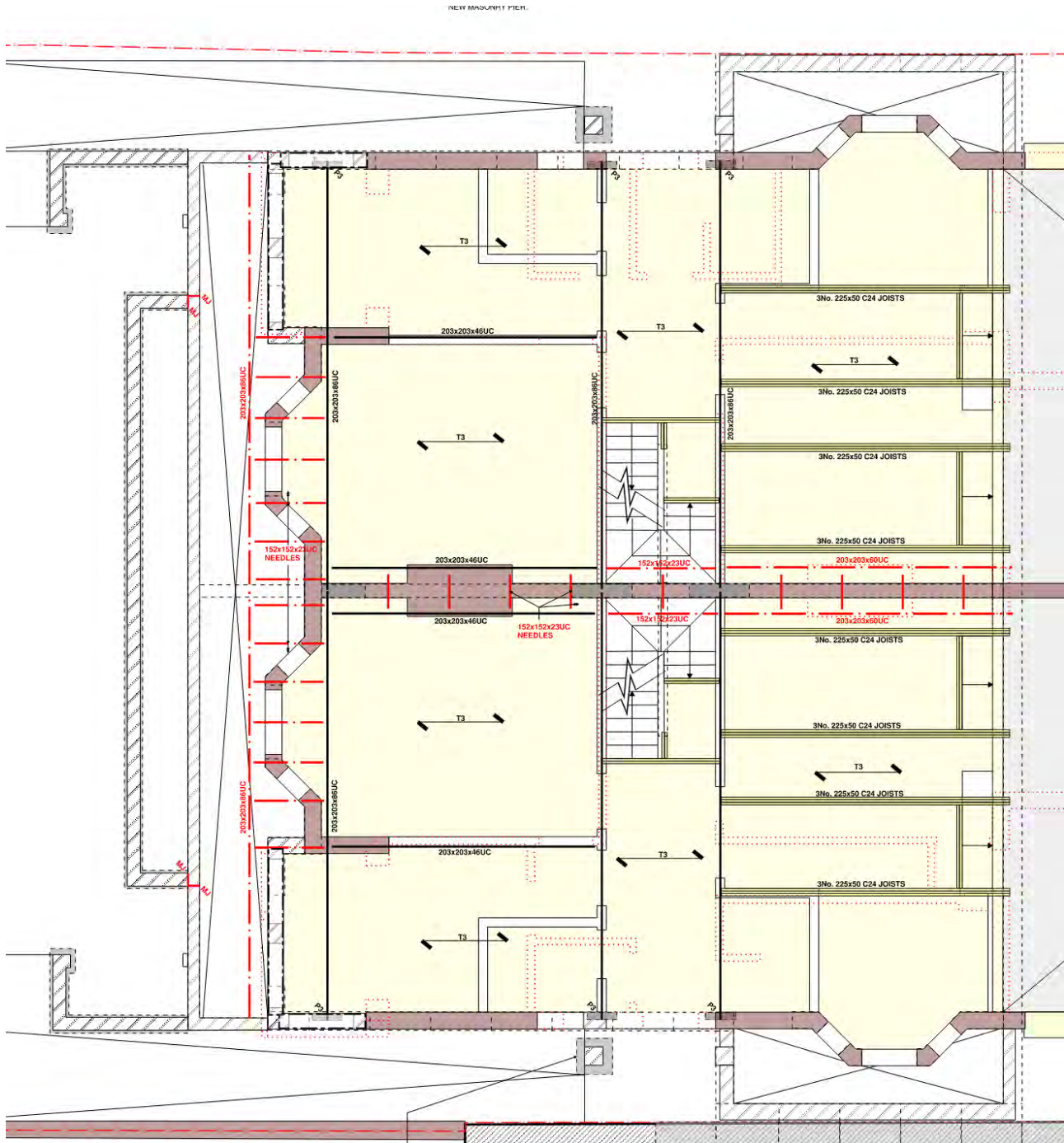


Figure 11 - Plan showing needling of retained walls to be supported on temporary steel structure

Stage 2a: Underpinning of existing structures

- Install reinforced and mass concrete underpinning in a carefully controlled five stage sequence as indicated on the drawings.
- The Contractor shall be responsible for ensuring that their operations do not in any way impair the safety or condition of the existing structure or the adjacent properties. They shall provide any temporary supports required for this purpose, and shall carefully inspect the condition of the structure both before and during the execution of the work and immediately inform the Engineer and Architect if they consider that any more stringent procedure than that specified is necessary.
- Before starting the work the Contractor is to check for any services that could be damaged by the work and shall provide for the maintenance of drainage services during the works and for the reinstatement of any services interrupted or disturbed by the excavations.
- Underpinning and retaining wall installation is to be carried out in short sections not exceeding 1000mm in length, in the numbered sequence shown on the drawings.
- Before underpinning, projecting portions of the existing footings are to be carefully cut off as detailed and the underside of the footings are to be cleaned and hacked free of any dirt, soil or loose material.
- The Engineer and Building Control Officer shall be given the opportunity of examining all excavations, prior to any underpinning or retaining walls being cast.
- Underpinning and retaining walls are to be cast to the widths and depths shown on the drawings. As far as practicable excavation and concreting of any section of underpinning or retaining wall shall be carried out on the same day. Un-concreted sections shall be kept covered to prevent the ingress of water.
- Excavation to any section of underpinning shall not be commenced until at least 48 hours after completion of any adjacent section of the work.
- The joint between adjacent sections of mass concrete underpinning is to be formed by creating a rough surface against which the first section is cast. Then, having thoroughly cleaned the exposed concrete face, the adjacent section may be cast. The joint between adjacent sections of reinforced concrete underpins or retaining walls should be prepared as above, however reinforced concrete underpins are to be dowelled together in accordance with the reinforcement detail drawings.

Stage 2b: Formation of front and rear retaining walls

- Whilst the underpinning works described in Stage 2a are ongoing, works to construct the front and rear retaining walls may be commenced. (Subject to stage 1 underpins being complete.)
- The rear elevation will at this stage have been partially demolished and resupported on a new steel frame with associated pad foundations.
- The existing front elevation should be needled at ground level and temporarily supported on steel framing spanning between completed Stage 1 underpins.
- To form the front and rear lightwells it is recommended that the adjacent ground be battered back to a safe angle to maintain stability of the excavation. Battering back the soil allows the front and rear retaining walls to be shuttered and cast in continuous lengths which will eliminate construction joints in the concrete, eliminate temporary works and reduce programme duration. The ground should be battered back in such a way so that the ground level adjacent to the boundaries is undisturbed, and a 45 degree line of load spread from existing foundations is maintained.

Stage 3: Bulk Excavation

- Upon completion of the perimeter retaining walls and underpinning (both internal and external), the bulk excavation may be commenced.
- Temporary propping to the retaining walls on the side elevations (as indicated on the structural plans and sections) should be installed once the excavation reaches the specified level.
- Excavation may be carried out by a mini excavator with spoil removed via conveyor as described in Stage 1.

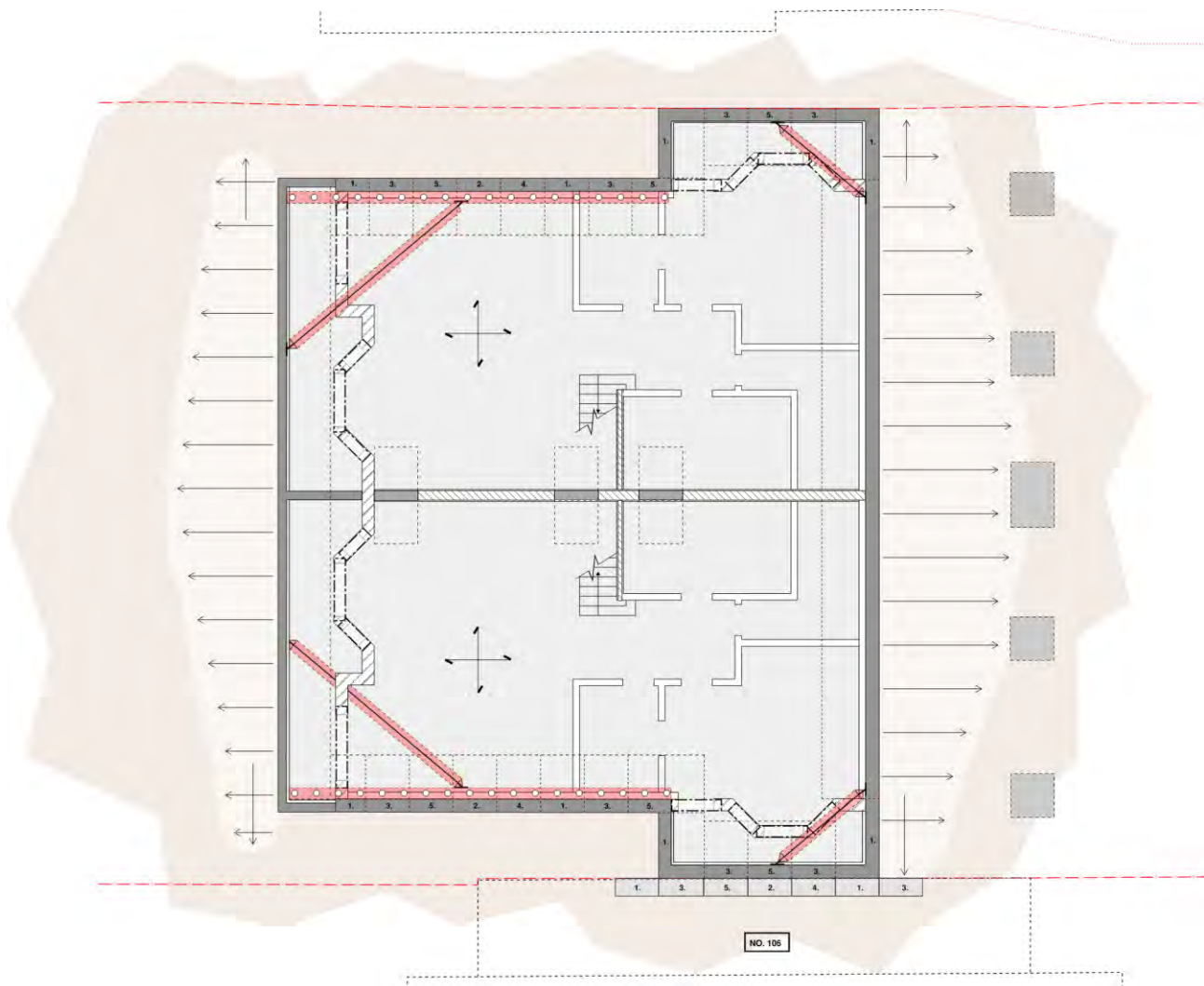


Figure 12 - Plan showing temporary prop arrangement to side elevation underpinning

Stage 4: Cast raft slab.

- Upon completion of the bulk excavation, the raft slab can be prepared.
- Install 50mm concrete or sand blinding.
- Install below ground drainage and associated pumping stations.

- Fix reinforcement, ensuring appropriate laps are achieved with the perimeter retaining wall and underpin toes and concrete covers are rigidly adhered to.
- Cast concrete raft and allow to cure to achieve appropriate design strength
- Remove temporary propping to the perimeter retaining walls and underpins

Stage 5: Backfill front and rear excavations

- The battered back soil to the front and rear of the site is to be backfilled to the appropriate level.
- Backfilling material should be granular and compacted regularly in 150mm layers.

Stage 6: Complete superstructure works.

11.3. Mitigating noise dust and vibration

The Haringey Development Management Plan states that any basement works should be completed in such a way to ensure that construction impacts such as noise, dust and vibration are minimised for the duration of the works.

The construction works will involve the demolition of a portion of the existing external walls, ground floor structure and cutting back the existing foundations. Those most likely to be affected by noise dust and vibration will be the immediate neighbours at 106 and 112 Colney Hatch Lane however the clear separation between the existing and neighbouring buildings in the form of side alleys will mean that any transfer of vibrations will be minimal. The large front driveway and the ability to contain material arisings within the site boundary will also assist in minimising impacts on users of Colney Hatch Lane.

The mitigation measures that are proposed to keep noise, dust and vibration to acceptable levels are described below:

Mitigation measures for demolition of existing façade and foundations;

- The amount of demolition of the external, perimeter structure has been limited to isolated sections of the facades and trimming of projecting portions of existing foundations. The breaking out or cutting back of existing masonry or concrete structures shall be carried out by diamond saw cutting where possible to minimise noise and vibration to the adjacent properties. The use of percussive breaking techniques will be avoided where possible.
- Dust suppression equipment should be used during the demolition process to ensure that any airborne dust is kept to a minimum. Concrete and masonry should also be wetted down prior to and during breakout to further inhibit airborne dust.

Mitigation measures for bulk excavation

- Due to the limited size of the site, the use of mechanical plant will likely be limited to a small excavator and conveyors. These will be used in conjunction with manual digging. The contractor should ensure that any mechanical plant is switched off when not in use and is subject to regular maintenance checks and servicing.
- Holding skips will be located behind hoarding on the front driveway.
- The contractor will ensure that the adjacent pavement will be regularly washed down and kept free of any dust or muck away resulting from the works.

Mitigation measures for the construction of the concrete basement

- The contractor should ensure that any concrete pours are completed within the permitted hours for noise generating works.
- The contractor should allow for a contingency period to ensure that concrete pours can be completed within these hours regardless of unforeseen circumstances such as batching plant delays and traffic congestion.
- The fabrication and cutting of steelwork for the reinforced concrete columns and slabs shall take place off site. If any rebar needs to be trimmed on site this should be completed using hydraulic or pneumatic tools instead of angle grinders.

Dust control In order to reduce the amount of dust generated from the site

- The contractor should ensure that any cutting, grinding and sawing should be completed off site where practicable. If cutting, grinding and sawing is being carried out on site, surfaces are to be wetted down prior to and during these types of work whenever possible.
- Any equipment used on site should be fitted with dust suppression or a dust collection facility.
- The contractor will be responsible for ensuring good practice with regards to dust and should adopt regular sweeping, cleaning and washing down of the hoardings and scaffolding to ensure that the site is kept within good order.
- Contact details of the contractor who will be responsible for containing dust and emissions within the site will be displayed on the site boundary so that the local residents can contact the contractor to raise any concerns regarding noise and dust.
- The building will be enclosed within suitable hoarding and any stockpiles of sand or dust-generating materials will be covered. Cement, fine aggregates, sand and other fine powders will be sealed after use.

11.4. Monitoring during works

The Contractor shall provide monitoring to all structures on site and directly adjacent to the basement excavation at the time of excavation and construction.

Monitoring shall be completed as follows:

- 1) Several months prior to any works being started to provide a base reading.
- 2) On a weekly basis during the excavation and until the basement construction is complete and the existing building loads have been transferred onto the permanent structure.
- 3) On a monthly basis thereafter for a 6-month period following completion of the notifiable works.

The allowable movement values will be agreed following the Party Wall agreement process but will typically be limited to 10mm lateral movement and 10mm settlement of existing structures.

The agreed limits will take account of the final construction methodology proposed by the Contractor.

The values will be set to ensure that the ground movement and associated damage category to the adjacent buildings is limited to Burland Damage category 1.

An example of an allowable movement specification is outlined below.

- Cumulative movement of survey points must not exceed:
 - a. Settlement
 - Code amber trigger values: +/-8mm
 - Code red trigger values: +/-11mm
 - b. Lateral displacement
 - Code amber trigger values: +/-8mm
 - Code red trigger values: +/-11mm
- Movement approaching critical values:
 - *Code amber trigger value:* All interested parties, including the Adjoining Owner's Surveyor and his Engineer, should be informed and an assessment should be undertaken to determine if the movements are reasonable when compared against the works undertaken to date. Any further actions required should be immediately agreed between the Surveyors and implemented by the Building Owner.

Notwithstanding the Party Wall requirements, the Contractor is to appoint a suitably qualified Structural Engineer who will be responsible for the reviewing of the movement monitoring results at appropriate stages and to provide immediate advice, remedial works and design as necessary in the event of adverse movement being noted.

If this trigger value is reached, the Contractor and his Engineer should provide all interested parties with their plan to implement any emergency remedial and supporting works deemed necessary.

The Contractor must be ready to carry out these works without delay if the movement continues and approaches the trigger value below.

- *Code red trigger value:* All interested parties including the Adjoining Owner's Surveyor and Engineer will be informed immediately. Works which could cause further movement will stop and if agreed necessary, should be reinforced using methods and equipment agreed at the above stage.

The Contractor is to ensure that the movement has stopped following the implementation of any remedial works designed and installed at this stage. The requirements of the Party Wall Act will also ensure that two of the three Surveyors and their advising Engineers shall then enter into an addendum Award, setting out whether or not the Building Owner's works can re-commence and when, and if so agree on additional precautions or modifications to the proposals prior to recommencement

The Contractor is to ensure that he has 24 hour / 7 days a week access to emergency support provision including but not limited to additional temporary props, needles, waling beams and concrete supply at the start of the excavation and prior to any likelihood of trigger values being reached.

12. Conclusion

This assessment has demonstrated that the proposed basement can be constructed without unacceptable adverse effects on:

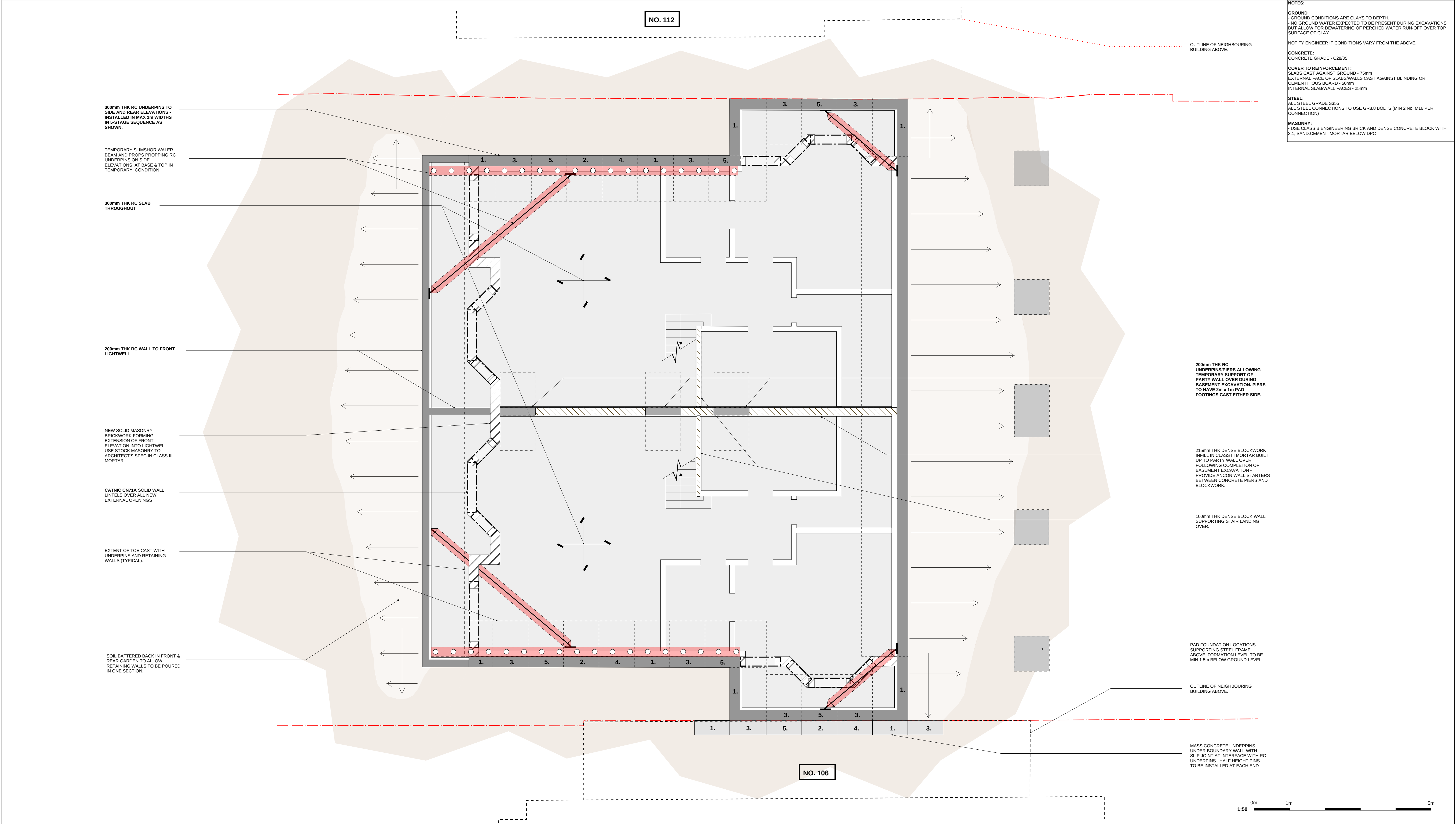
- The local hydrogeology and flood risk of the site.
- The structural stability of the existing buildings on the site or neighbouring buildings.
- Trees of significance. (Noting that no trees of significance are in the near vicinity of the site).
- Local infrastructure (Noting that no buried or overground public infrastructure is in the vicinity of the proposed basement.)

A viable construction methodology has been presented which demonstrates that the basement can be constructed in a safe manner which limits risk and movement to adjacent and existing structures.

The construction methodology has proposed viable techniques to minimise local environmental effects such as noise, vibration and dust.

Appendices

A Proposed Structural Drawings



- NOTES:**
- GROUND**
- GROUND CONDITIONS ARE CLAYS TO DEPTH.
- NO GROUND WATER EXPECTED TO BE PRESENT DURING EXCAVATIONS BUT ALLOW FOR DEWATERING OF PERCHED WATER RUN-OFF OVER TOP SURFACE OF CLAY
NOTIFY ENGINEER IF CONDITIONS VARY FROM THE ABOVE.
- CONCRETE:**
CONCRETE GRADE - C28/35
- COVER TO REINFORCEMENT:**
SLABS CAST AGAINST GROUND - 75mm
EXTERNAL FACE OF SLAB/WALLS CAST AGAINST BLINDING OR CEMENTITIOUS BOARD - 50mm
INTERNAL SLAB/WALL FACES - 25mm
- STEEL:**
ALL STEEL GRADE S355
ALL STEEL CONNECTIONS TO USE GR8.8 BOLTS (MIN 2 No. M16 PER CONNECTION)
- MASONRY:**
- USE CLASS B ENGINEERING BRICK AND DENSE CONCRETE BLOCK WITH S.I. SAND-CEMENT MORTAR BELOW DPC

This drawing is to be read in conjunction with all relevant architects, engineers and specialists drawings and specifications. Do not scale from this drawing.					drawing title Proposed Basement Floor Plan					contact Justin Gathercole MEng CEng MStructE Tel: 07795184417 Email: JusGathercole@Gmail.com					project 108-110, Colney Hatch Lane London N10 1EA				

NOTES:

TIMBER:

T1 -

T2 -

T3 - 225 x 50 C24 JOISTS @ 400mm c/c w/ 18mm PLY DECK

ALL DOUBLED/TRIPLED UP TIMBERS TO BE BOLTED TOGETHER WITH M12 BOLTS @ 500mm C/C & W/ TOOTHPLATE CONNECTORS OR TIMBERLOK SCREWS @ 200mm c/c

STEEL:

ALL STEEL GRADE S355

ALL STEEL CONNECTIONS TO USE GR8.8 BOLTS (Min 2 No. M16 PER CONNECTION)

P1 -

P2 - 600mm LG x 100mm WD MASS CONCRETE PADSTONE EXTENDING DOWN TO TOP OF RC UNDERPINS



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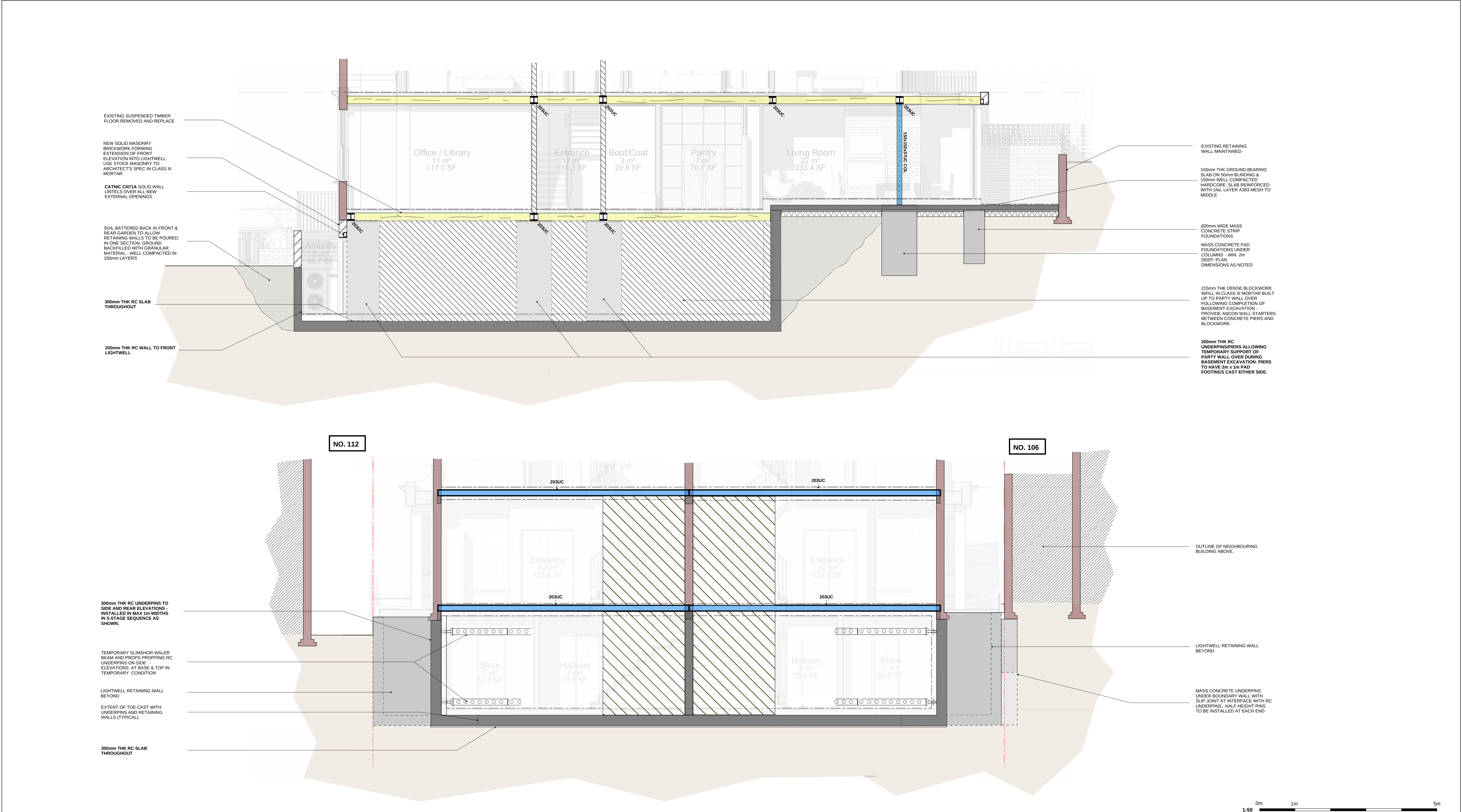
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project no. 2249	drawing status Preliminary
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drg no. SK02	revision 01
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scale (s)	date	drawn
1:50 @ A1	Oct '22	JG

01	07/10/22	JG	For Planning	
rev	date	by	chk	description



This drawing is to be read in conjunction with all relevant architects, engineers and specialists drawings and specifications.

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drawing title
Proposed Basement Sections

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project
**108-110, Colney Hatch Lane
London
N10 1EA**

01	07/10/22	JG		For Planning
rev	date	by	chk	description

scale (s)	date	drawn
1:50 @ A1	Oct '22	JG

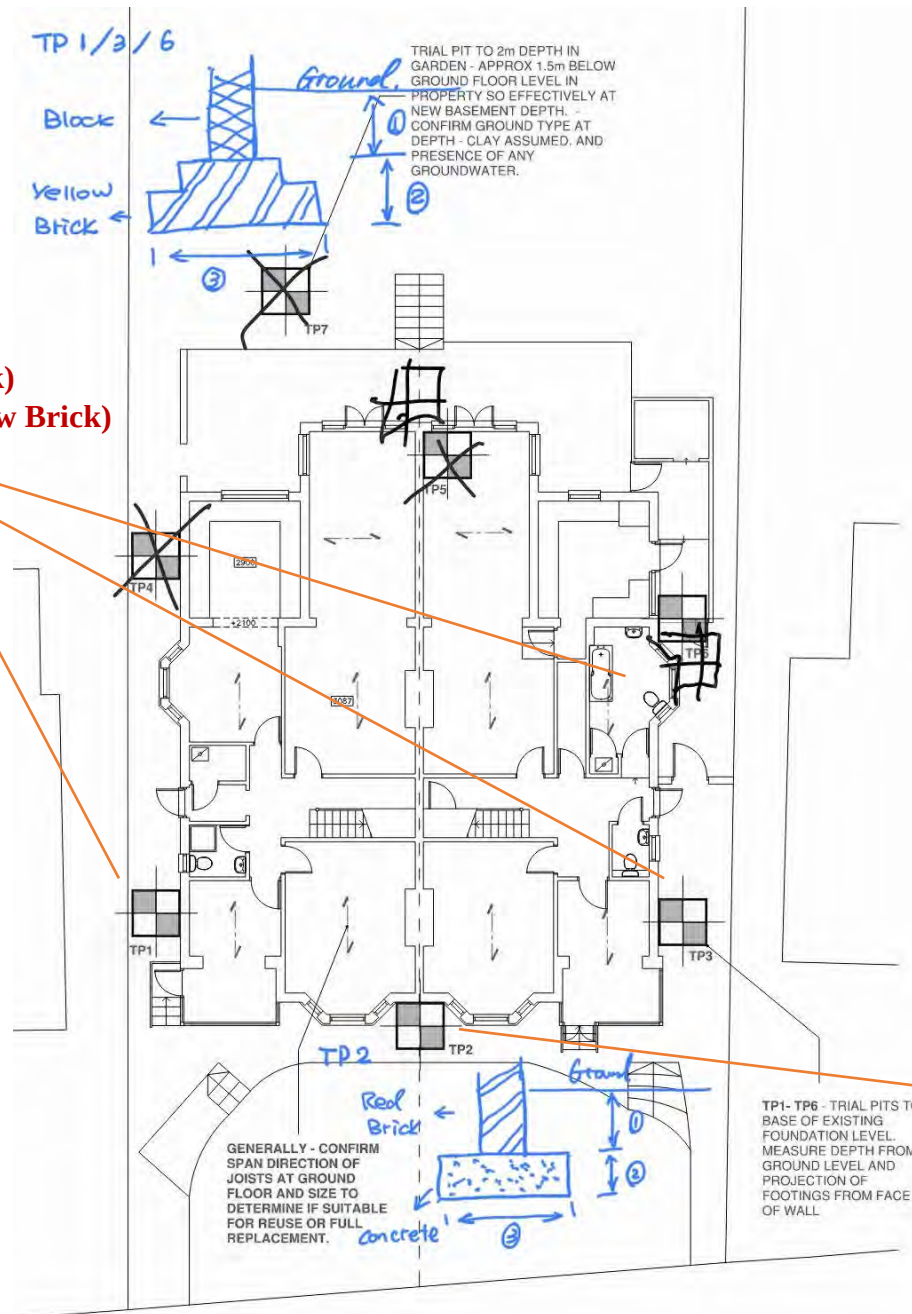
project no. 2249	drawing status Preliminary	
	drg no. SK10	revision 01

B Site Investigation Logs

N10 1EA Foundation

15/09/2022

TP1/3/6
1.100 (Block)
2.140 (Yellow Brick)
3.440



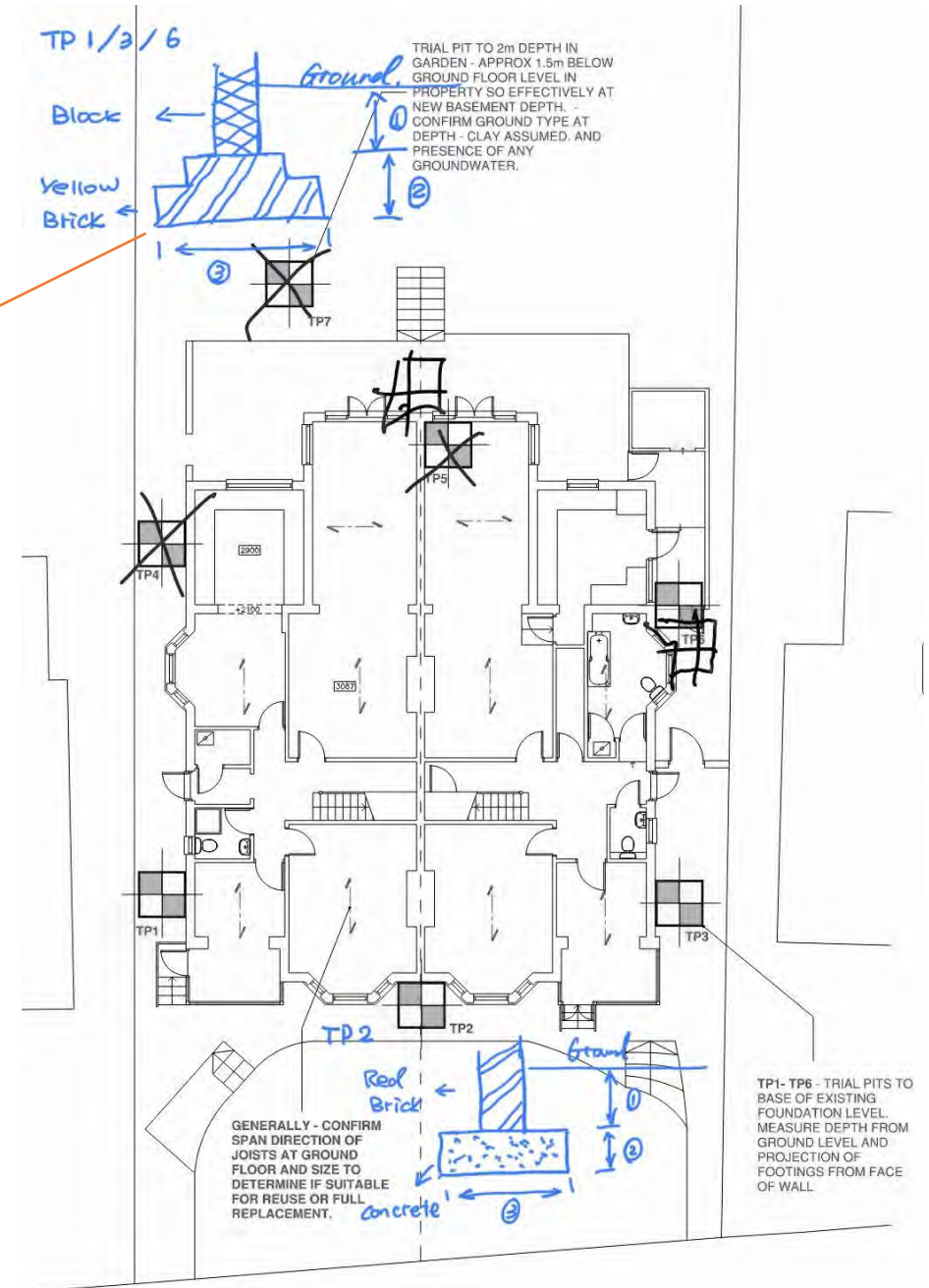
TP2
1.400 (Red Brick)
2.200 (Concrete)
3.550

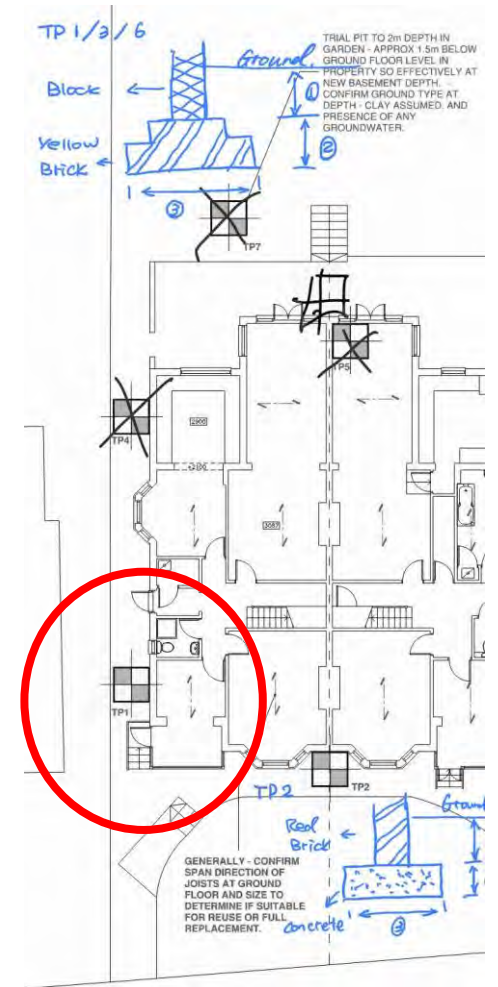
TP1/3/6
Foundation : Yellow brick x 2 layer
H:65mm
W: 102
L:215



5055013403541 65MM YELLOW MULTI STOCK

Item In Stock for Home Delivery





10mm Concrete

