

CD&B BASEMENTS

**CONSTRUCTION MANAGEMENT PLAN  
APPENDIX F**

**CONTRACTORS METHOD STATEMENT**

UNDERPINNING OF PARTY WALL

**Flat 1, 31 Heath Drive, London NW3 7SB**

**client:**  
**date:**  
**prepared by:**

**Callender Howorth**  
**10<sup>th</sup> June 2015**  
**J.Puddy**

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This document to be read in conjunction with the following:

## Appendices

- A. MMP Design drawings 4467 -01, 02, 03**
- B. Underpinning Diagrams - clay soil**
- C. 1193-110-SITE SET UP PLAN**

## **1. General**

The works described herein are the underpinning of the Party Walls of No 31 Heath Drive NW3. It is our intention that the ground floor alterations will be carried out prior to the formation of the basement.

The extent and scope of the underpinning is shown in Appendix A – MMP Design drawings 4467 -02 & 03

## **2. Hoarding for Access and Conveyor**

Access to the working area will be from the side entrance to the lower ground floor, please see Appendix C- 1193-110-SITE SET UP PLAN

On commencement, site operatives will carry out the following sequence of works;

- Carefully protect existing railing, gates and fixtures.
- Protect carefully the existing hedge and planting
- Protect front access path with plywood boarding.
- Erect a 2.4m high marine ply hoarding around the trunk of the tree outside the main entrance on the pavement comprising plywood hoarding; 50mm x 100mm vertical standards @ 400mm centres; 50mm x 100mm top bearer; 100mm x 100mm sole bearer spiked to ground.
- Erect 3.00m high site compound comprising plywood hoarding; 50mm x 100mm vertical standards @ 400mm centres; 50mm x 100mm top bearer; 100mm x 100mm sole bearer spiked to ground. Lockable door for access.
- Protect lower ground floor windows and reveals within hoarding with plywood fixed to 50mm x 50mm perimeter bearer fixed to wall.
- Construct plywood protection to public where conveyor extends over footpath.
- Construct plywood roof covering to hoarding supported on 50mm x 100mm bearers at 400mm centres.
- Install conveyor.
- Install night-lights and safety notices.

### **3. Temporary Works Procedure**

The underpinning will be constructed in the sequence shown on the structural engineer's drawings or as agreed on site by the appointed Building Control Officer.

Our temporary works proposals for the support of clay soils are as follows:

- Site operatives hand excavate directly underneath the wall to be underpinned using hand and compressed air tools to form a preliminary pit approximately 1.00 m wide x 1.00 m long to underside of existing foundation approximately 1.00 m deep. The length of any base is individually assessed on site with due regard to the type and condition of the foundation, and structural geometry above.
- Install 2 No horizontal Acrow props at top and bottom of the excavation spanning across onto the central soil mass (dumpling excavation); use scaffold boards as spreaders at both ends of the props.
- Hand excavate the pit as above to formation level of new reinforced concrete toe, providing at all times adequate lateral support and propping as excavations progress to maintain acceptable levels of safety. Rear of excavation will not remain unsupported for longer than 48 hours and will be left fully propped when the site is unattended.
- Once the excavation is completed to the design depth and width and having been confirmed as being appropriate by our engineers. The stratum at the proposed founding depth will be then be inspected by the Building Control Officer prior to any reinforcement being placed or concrete being poured.

Our temporary works proposals for supporting existing structures above basement excavation are as follows:

As and when required by the sequence of underpinning operations:

**Supporting existing timber floors** above where sleeper walls have been removed:

- Position 100x100mm temporary timber beam/plates lightly packed to underside of joists either side of existing sleeper wall and support with vertical Acrow props @ 750 centres. Remove sleeper walls and insert steel beam as a replacement. Beams to bear at masonry walls onto concrete padstones (refer to Structural Engineer's details for padstone & beam sizes) Dismantle props and remove timber plates.

#### **4. Concrete underpinning**

This stage describes the construction of the concrete underpinning.

The following is to be read in conjunction with the Structural Engineer's details in respect of dimensions and all associated notes covered on their drawing and Appendix B – MS Propping Diagram. The sequence of construction of the underpinning will be in a hit and miss pattern (1, 4, 2, 5, 3, 6), depending on the structural environment and access constraints.

- The ground conditions will be checked by the building control inspector prior to installation of design reinforcement and concreting.
- The design reinforcement will be installed for the slab over the void for the mass toe and bars left turned up to accept the new RC stem, steel reinforcement will be held in position using plastic spacers and Class "B" engineering bricks.
- Pour concrete foundation to the levels shown on the drawing.

Allow 24 hours for the concrete to cure before the next stage;

- Following construction of the toe, a single sided shutter formed from timber and KD4 trench sheeting is then erected and back propped as required, and then concrete poured to form the underpinning base up to a maximum of 100mm below the underside of the existing foundation.

After 24 hours the temporary wall shutters are removed. The void between the top of the underpin base and underside of the existing foundation will then be dry packed with a mixture of sharp sand and cement (Ratio 3:1 sharp sand: cement) as follows;

- Trim and clean underside of existing foundation and dry pack between new stem of pin and underside wall well-rammed in horizontal layers not exceeding 75mm thick. Dry packing shall be left for at least 24 hrs before commencing works on any adjacent sequence of underpins.
- Three days after each pin has been completed we will strike formwork and support concrete pin horizontally off dumping excavation to withstand any horizontal earth pressure. The propping is to have continuous scaffold boards at each end.
- The dumping excavation (central area of excavation) shall not be removed until the perimeter underpinning has been completed. Prior to this work we will construct a thrust concrete block below level of floor slab (approx 450x350x350) remove horizontal scaffolding; re-erect diagonal propping supported off the concrete thrust block and up against new concrete pin with double scaffold boards as spreaders tightly packed with folding wedges. Propping to remain until concrete pin has reached its maximum strength.
- Site operatives will then break off projecting brick or concrete footing back to internal face of brick wall and a further 48 hours will be allowed before the next sequence of underpinning can be excavated.
- Construction joints, when required, will be formed using a suitable shear key or joggle joint.

## **5. Excavation, drainage and basement slab construction**

Once the retaining structure is complete to all walls, the bulk excavation can be completed.

- Site operatives will provide maintain lateral restraint to the retaining wall by means of the installation of horizontal propping using Titan Super props or similar and timber walings to the face of the RC wall across the width of the basement to prevent to allow for excavation to formation level prior to construction of the new basement slab.
- The mass will be removed and levels reduced to formation level.
- The pump sump units and associated underground drainage will then be installed in conjunction with the mechanical and electrical details and architectural layouts.
- The design steel reinforcement will then be fixed in the slab. This will be checked by the engineer and building control inspector prior to concreting.
- Once the slab has been cast, all temporary shoring can be safely removed.

## **7. Internal waterproofing membrane and screed**

- Once the basement slab is complete, the DELTA internal waterproofing cavity membrane will be installed as per the architectural layouts and manufacturers technical specification.
- The floor finishes which may include insulation and under floor heating, can be laid as per the final architectural details.
- A cement and sand screed will be applied on the slab surface.
- This completes the structural work by the Contractor, in preparation for the fit out works.

## **8. Ground Water Disposal**

Should ground water be encountered then our proposals for ground water disposal would be as follows:

- Install 2 No 50mm diaphragm submersible pumps in sumps to drain ground water with flexible hoses discharging into nearest manhole.
- Provide UPVC silt tank of 400 litres capacity for pumped ground water to filter fines and gravel prior to water discharging into house manhole
- Flexible hose connection from silt tank to discharge into nearest manhole.
- Operatives will be instructed to regularly empty the silt tank of deleterious matter.

## **9. Supervision and Inspecting Excavations**

A competent person will supervise the installation, alteration and removal of excavation support.

People working in excavations will be given clear instructions on how to work safely. A competent person will inspect excavations:

- At the start of each shift before work begins;
- After any event likely to have effected the strength or stability of the excavation;
- After any accidental fall of masonry, earth or other material.

### **Plant Details**

All hired plant brought on to site will be inspected prior to use. The Hire Company will submit evidence of last test and all statutory test certification.

Plant will be recorded on a 'Plant Register'

Mechanical Plant operation is to be carried out only by a nominated competent person (CITB or similar recognised approved body).

### **Technical Information**

Please refer to attach Structural Engineer CMS, drawings and Architects drawings.

### **Deliveries and Site Access**

All deliveries are to be co-ordinated by the Project Manager.

For safety a Banksman will be available to coordinate traffic to ensure safety during deliveries and departures from site.

No road closures are envisaged. We will require the suspension of two parking bays directly outside the property for the duration of the excavation. A large skip will be positioned on the suspended bay at the front of the property with temporary hoarding around in order to facilitate the removal of waste and other materials from the construction works.

Consultation with Councils Transportation Team on the proposal will be carried out prior to works commencing.

### **Materials**

Materials will be temporarily unloaded into the front parking bay then moved and stored in then front garden.

All Materials will be as per specification from approved suppliers.

### **Training**

Training will be carried out through on-site inductions and tool box talks.

## **10. Control Measures**

### **Site Rules**

All operatives will be informed via a site induction / toolbox talk and expected to comply with the Contractor's site rules.

They will be informed of emergency procedures, assembly points, first aid and location of facilities.

#### **Access to Work Area**

Site personnel access will be through the hoarding to the front of the building.

The provision of a safe means of access to the work area is the responsibility of the Contractor / Client.

### **Control of Dust and Dirt Emissions**

The use of water sprays to control dust levels will control potential dust pollution. The hoarding placed around the skip will be designed to ensure the impact of dust is kept to a minimum. This operation will take place at all times during the excavation process and when site vehicles and or plant are moving from site.

All waste will be removed from site by registered waste handlers and taken to a tip authorised and licenced to accept the waste type.

### **Welfare Facilities**

Site accommodation and welfare facilities will be provided by the Contractor / Client throughout the duration of construction.



### **Personal Protective Equipment (PPE)**

All operatives will wear appropriate personal protective equipment at all times issued to them. The Site Management and Contractor Foremen will take appropriate and immediate action if an employee does not use appropriate protective clothing.

PPE required as follows:

- Hard hat
- Safety boots
- Gloves
- High visibility jacket / clothing
- Ear defenders / plugs (when using breakers, working near compressor, etc)
- Goggles / visor (when using breakers in concrete)
- Dust mask / Respiratory protection, breathing
- Safety Harness (when in confined spaces)

### **Noise and Vibration**

All works will be completed in accordance with building control's environmental policy and the site NVDMP.

Electric hand tools will be used for all or the great majority of the work, significantly reducing noise and vibration compared with compressed air tools. Compressed air tools will only be used if electric tools are not sufficiently powerful to deal with the specific areas of work.

### **Power**

A 110V electrical supply only will be allowed on the Project. This will be supplied via a 110V step down transformer from the existing 240V supplies

Electrical leads and spider boxes will be inspected weekly. All portable tools will be visually inspected prior to use.

No unauthorised repairs will be permitted. Any defective equipment will be immediately withdrawn from service.

### **Fire**

All works contractors will be fully acquainted with the site emergency procedures and will ensure their personnel comply with them in the event of an emergency. Emergency Plans will be displayed in suitable locations on site and the site notice board.

A plan of site's fire escape routes and details of the local hospital will be displayed along with any statutory notices on the site notice board.

This information will also be conveyed to all operatives during the site induction.

## **Vermin**

Vermin are not expected to be encountered, however if vermin are found then the Council's Pest Control services will be contacted so that an appropriate course of action can be taken.

## **9. Monitoring**

The Engineer has confirmed that the anticipated building damage category is Risk level 0 or 1 in accordance with Burland et al – i.e negligible to very slight cracking which is easily treated with normal decoration.

### **Trigger levels**

- Green - Fresh cracks up to 1mm - no action. Make good on completion.
- Amber - Fresh cracks 2-4mm - review work procedures and alter as necessary to minimise cracking. Inform Party Wall Surveyors and Engineer.
- Red - Fresh cracks greater than 5mm - STOP work. Ensure area is adequately propped. Inform Party Wall Surveyors and Engineer.

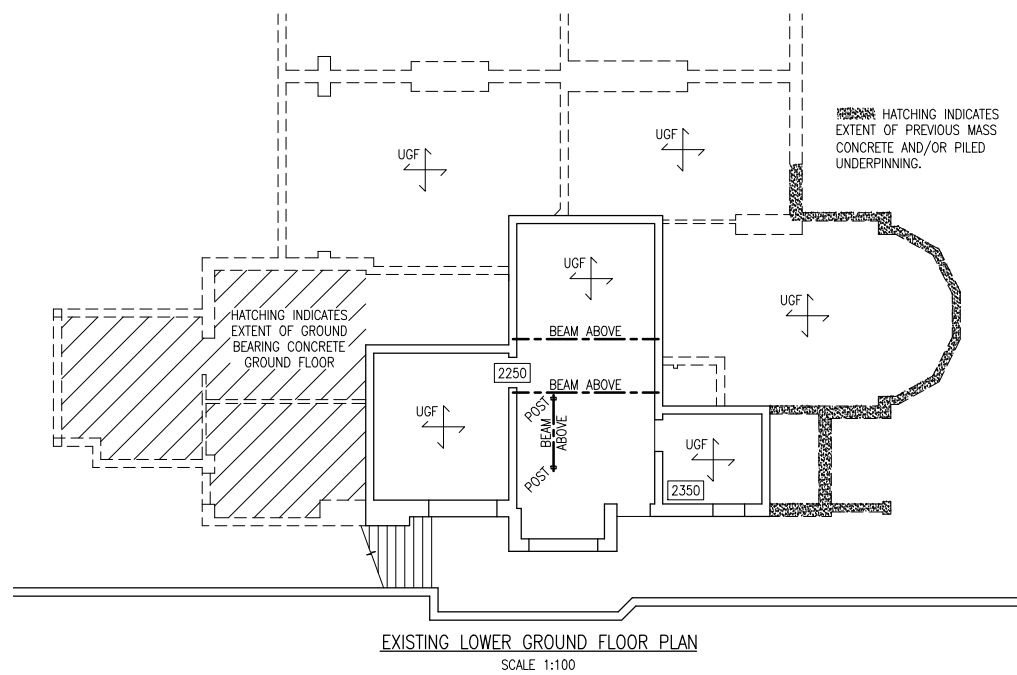
Upon commencement of site set up datum points will be established on the façade of the properties and the adjoining properties, these will be recorded from a fixed point opposite.

Once underpinning is underway further checks will be carried out at fortnightly intervals, details will be submitted to the Supervising Engineer.

The main method of monitoring however will be regular visual inspection of the property by the Structural Foreman, should any evidence of movement appear excavation works will cease pending site inspection by the Supervising Engineer and will not recommence until a suitable way forward has been agreed.

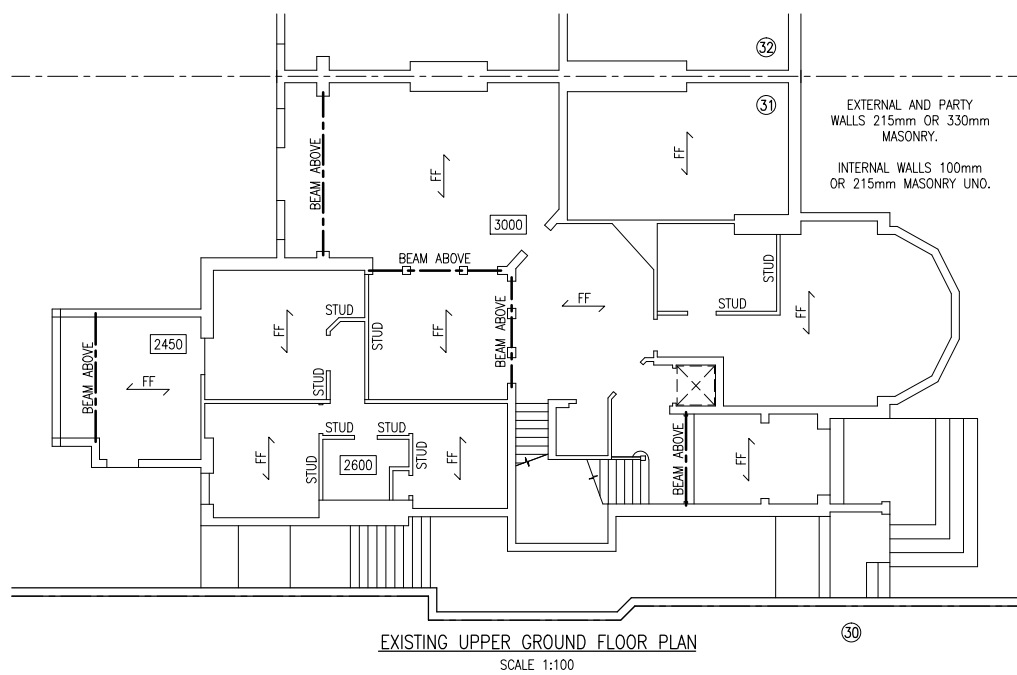
## **Appendix**

- A. MMP Design drawings 4467 -01, 02, 03**
- B. Underpinning Diagrams - clay soil**
- C. 1193-110-SITE SET UP PLAN**



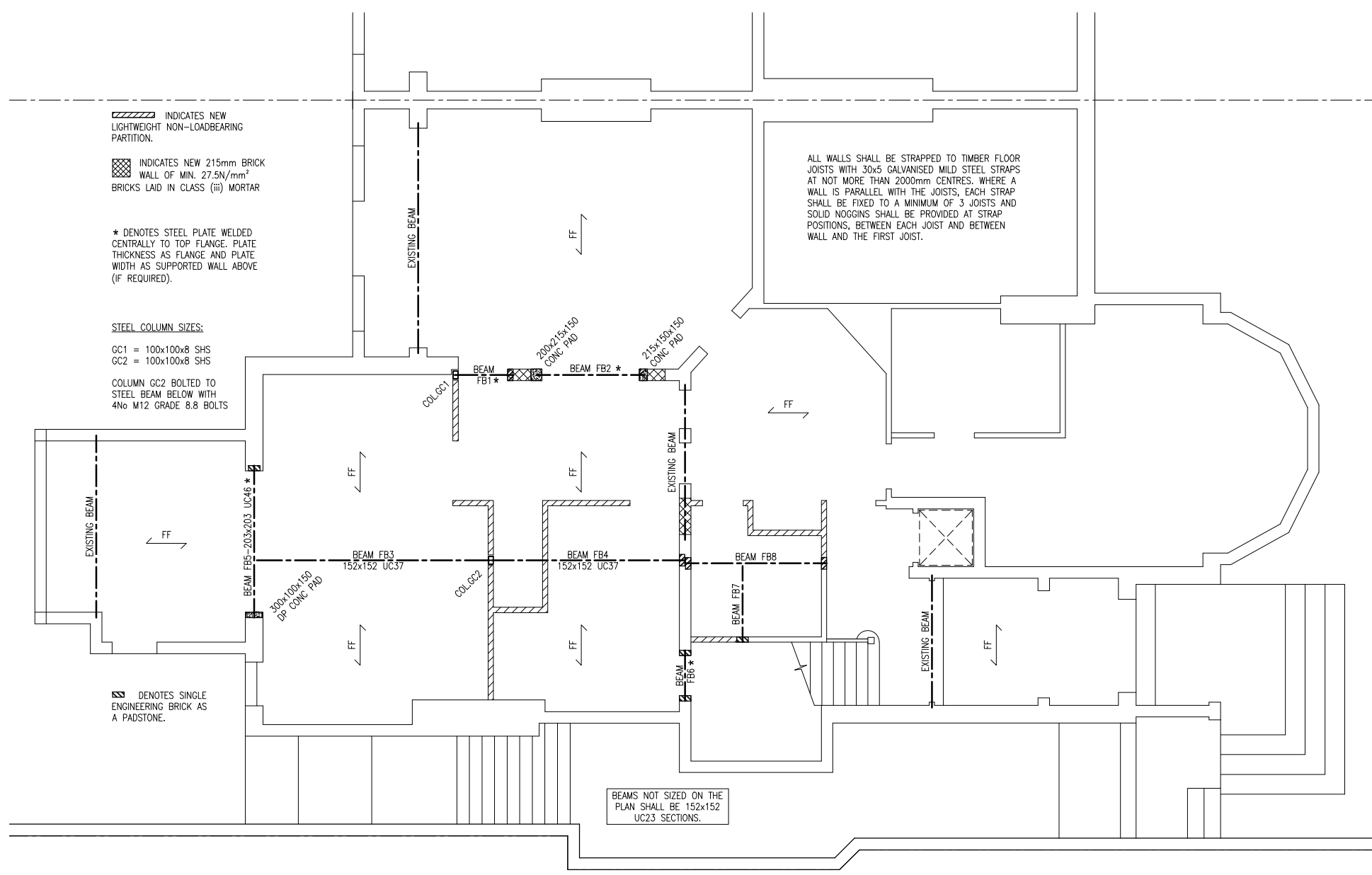
EXISTING LOWER GROUND FLOOR PLAN

SCALE 1:100



EXISTING UPPER GROUND FLOOR PLAN

SCALE 1:100



PROPOSED UPPER GROUND FLOOR PLAN

SCALE 1:50

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  - DO NOT SCALE OFF THIS DRAWING.
  - ALL TEMPORARY WORKS SHALL BE THE RESPONSIBILITY OF THE MAIN CONTRACTOR BUT SHOULD ADVICE BE GIVEN BY THE ENGINEER, NO RESPONSIBILITY WILL BE ACCEPTED UNLESS THE ADVICE IS CONFIRMED IN WRITING BY THE CONTRACTOR PRIOR TO THE WORKS BEING CARRIED OUT
  - THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE STABILITY OF THE EXISTING STRUCTURE AND EARTHWORKS ON THE SITE AND ADJOINING SITES AND MUST TAKE ALL NECESSARY PRECAUTIONS TO SAFEGUARD THIS. ADEQUATE SHORING SHALL BE INSTALLED DURING THE WORKS TO ENSURE STABILITY OF THE STRUCTURE AND SUCH SHORING IS TO BE ADEQUATELY FOUNDED.
  - ANY DEVIATION FROM THE DETAILS SHOWN MUST BE NOTIFIED TO THE ENGINEER BY THE CONTRACTOR IN WRITING BEFORE BEING CARRIED OUT.
  - THE LOCAL AUTHORITY'S BUILDING INSPECTOR AND THE ENGINEER ARE TO BE INFORMED BY THE CONTRACTOR IN WRITING AT LEAST 48 HOURS PRIOR TO THE WORKS STARTING ON SITE AND THEIR AGREEMENT OBTAINED THAT WORK CAN COMMENCE.
  - FIRE PROTECTION TO ALL STRUCTURAL MEMBERS SHALL ACHIEVE NOT LESS THAN A 1 HOUR STANDARD.
  - ALL NEW STRUCTURAL TIMBER SHALL BE GRADE SC4 (OR C24) TO BS. 4978 UNLESS OTHERWISE NOTED AND SHALL BE TREATED WITH AN APPROVED TIMBER PRESERVATIVE, INCLUDING CUT ENDS AND NOTCHES.
  - ALL STRUCTURAL STEELWORK SHALL BE MILD STEEL AND PAINTED WITH 1 COAT OF RED OXIDE AT THE FABRICATION WORKS AND 1 COAT ON SITE AFTER ERECTION, EACH COAT WITH A DRY FILM THICKNESS OF NOT LESS THAN 50 MICRONS. STEELWORK TO BE ENCASED IN CONCRETE SHALL BE UNPAINTED.
  - ALL STEELWORK CONNECTION DESIGNS AND FABRICATION DETAILS SHALL BE PREPARED BY THE APPOINTED SPECIALIST STEELWORK CONTRACTOR UNLESS OTHERWISE NOTED.
  - THE CONCRETE MIX FOR PADSTONES SHALL BE A 1:4 MIX.
  - BRICKWORK SHALL BE CONSTRUCTED USING BRICKS WITH A MINIMUM CRUSHING STRENGTH OF 27.5N/mm² AND BLOCKWORK SHALL BE CONSTRUCTED USING BLOCKS WITH A MINIMUM CRUSHING STRENGTH OF 2.8N/mm² UNLESS OTHERWISE NOTED. ALL MASONRY SHALL BE LAID IN CLASS (iii) MORTAR.

Rev.	Revision	Date

Client

**CD&B**  
BASEMENTS

Project

**31 HEATH DRIVE**  
**LONDON**  
**NW3 7SB**

Title

**PROPOSED BASEMENT EXTENSION**  
**AND ALTERATIONS**  
**STRUCTURAL DETAILS - SHEET 1**

Drawing Status:

**BUILDING REGULATIONS**

Date: MAY/2105 Drawn by: SB

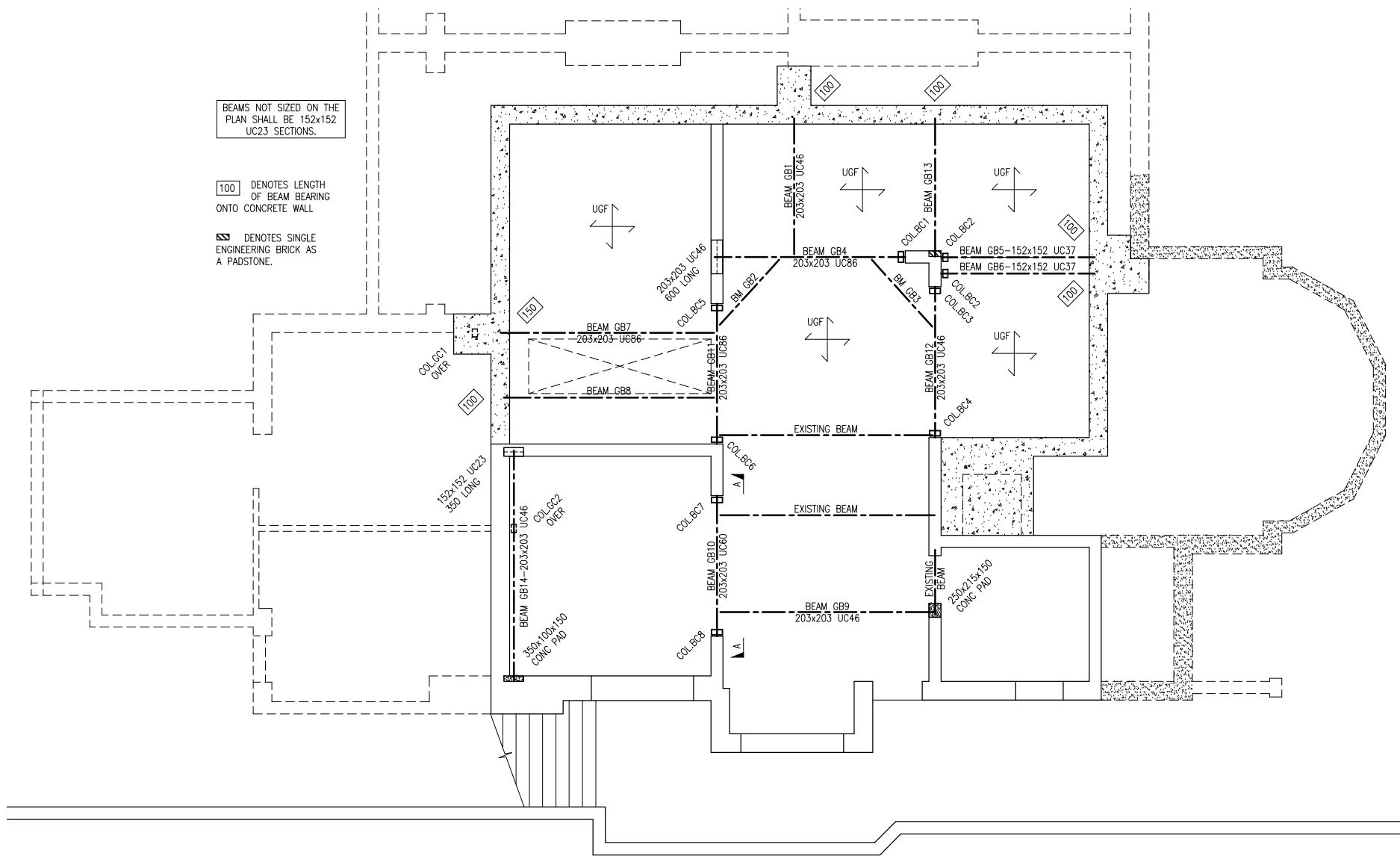
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<b>4467</b>	<b>01</b>	

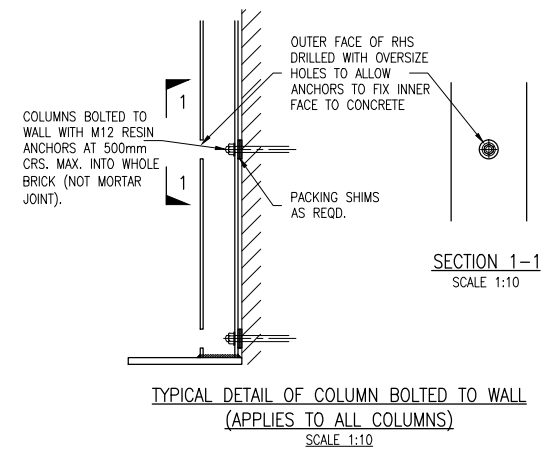


PROPOSED LOWER GROUND FLOOR PLAN  
SCALE 1:50

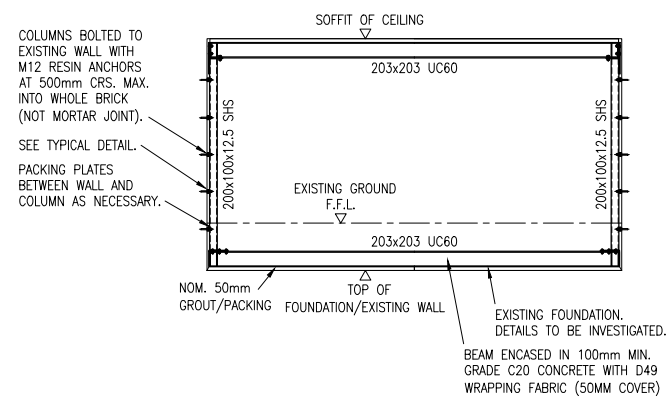
PROVIDE SOLID TIMBER NOGGINS TO NEW AND EXISTING JOISTS. NOGGINS SHALL NOT BE LESS THAN 38mm WIDE AND AT LEAST THREE QUARTERS OF JOIST DEPTH WITH 1 ROW CENTRALLY FOR JOIST SPANS LESS THAN 4.5m AND WITH 2 ROWS AT THIRD SPAN POINTS FOR JOIST SPANS GREATER THAN 4.5m.

WHERE NEW NON-LOAD BEARING LIGHTWEIGHT PARTITIONS ARE TO BE CONSTRUCTED, DOUBLE EXISTING FLOOR JOISTS LOCALLY IF PARALLEL TO PARTITION OR PROVIDE A ROW OF SOLID NOGGINS DIRECTLY BENEATH PARTITION IF PERPENDICULAR TO JOISTS.

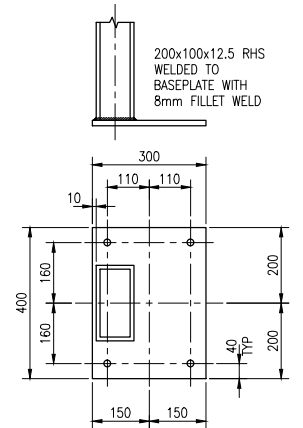
WHERE JOISTS ARE JOINED TO FORM A SINGLE TRIMMER, USE M12 BOLTS AT 400mm CENTRES WITH 75mm DIAMETER DOUBLE SIDED TOOTHED PLATE CONNECTORS. HALVE THE BOLT SPACING AT THE SUPPORTS.



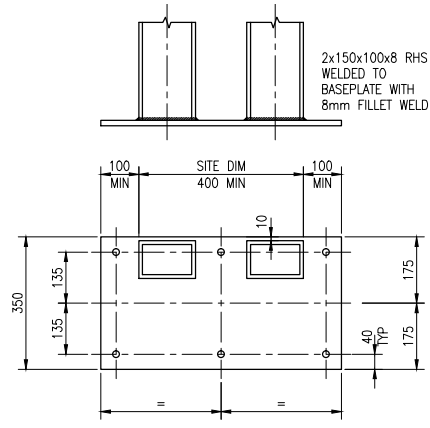
TYPICAL DETAIL OF COLUMN BOLTED TO WALL  
(APPLIES TO ALL COLUMNS)  
SCALE 1:10



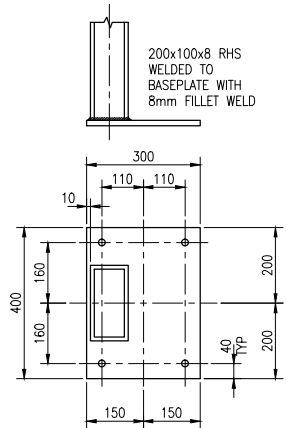
ELEVATION A-A  
N.T.S.



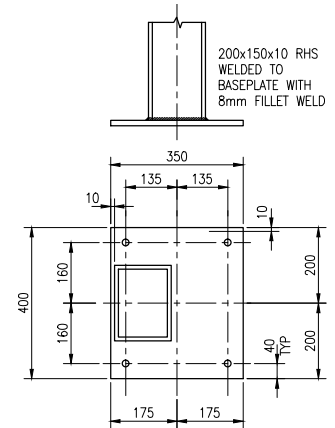
20mm THK BASEPLATE.  
4 No. 18mm DIA HOLES TO RECEIVE 16mm DIA H.D. BOLTS  
COLUMNS BC1 & BC6  
SCALE 1:10



18mm THK BASEPLATE.  
6 No. 18mm DIA HOLES TO RECEIVE 16mm DIA H.D. BOLTS  
COLUMNS BC2  
SCALE 1:10



16mm THK BASEPLATE.  
4 No. 18mm DIA HOLES TO RECEIVE 16mm DIA H.D. BOLTS  
COLUMNS BC3 & BC4  
SCALE 1:10



24mm THK BASEPLATE.  
4 No. 18mm DIA HOLES TO RECEIVE 16mm DIA H.D. BOLTS  
COLUMN BC5  
SCALE 1:10

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  - ALL STRUCTURAL STEELWORK SHALL BE MILD STEEL AND PAINTED WITH 1 COAT OF RED OXIDE AT THE FABRICATION WORKS AND 1 COAT ON SITE AFTER ERECTION, EACH COAT WITH A DRY FILM THICKNESS OF NOT LESS THAN 50 MICRONS. STEELWORK TO BE ENCASED IN CONCRETE SHALL BE UNPAINTED.
  - ALL STEELWORK CONNECTION DESIGNS AND FABRICATION DETAILS SHALL BE PREPARED BY THE APPOINTED SPECIALIST STEELWORK CONTRACTOR UNLESS OTHERWISE NOTED.
  - THE CONCRETE MIX FOR PADSTONES SHALL BE A 1:4 MIX.
  - BRICKWORK SHALL BE CONSTRUCTED USING BRICKS WITH A MINIMUM CRUSHING STRENGTH OF 27.5N/mm<sup>2</sup> AND BLOCKWORK SHALL BE CONSTRUCTED USING BLOCKS WITH A MINIMUM CRUSHING STRENGTH OF 2.8N/mm<sup>2</sup> UNLESS OTHERWISE NOTED. ALL MASONRY SHALL BE LAID IN CLASS (iii) MORTAR.

Rev.	Revision	Date

Client  
**CD&B**  
BASEMENTS

Project  
**31 HEATH DRIVE**  
LONDON  
NW3 7SB

Title  
**PROPOSED BASEMENT EXTENSION AND ALTERATIONS**  
STRUCTURAL DETAILS - SHEET 2

Drawing Status:  
**BUILDING REGULATIONS**

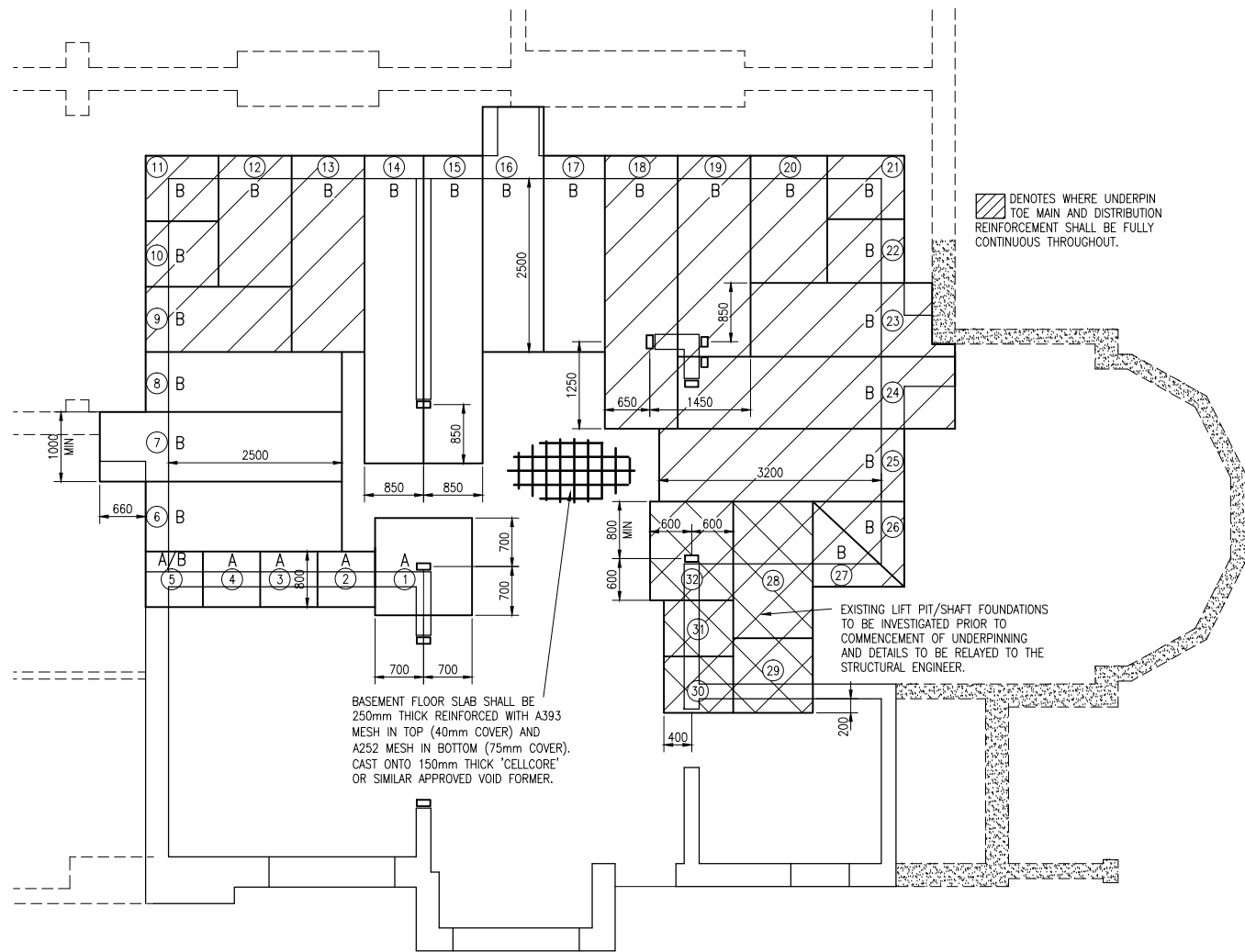
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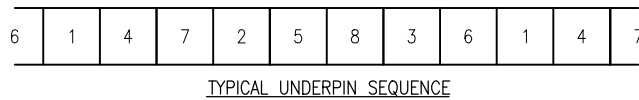
First Floor Unit 6  
Union Park  
Packet Boat Lane  
Uxbridge UB8 2GH  
Tel: 01895 430700 Fax: 01895 430550  
Email: mail@mmpdesign.co.uk

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Job No. <b>4467</b>	Dwg. No. <b>02</b>	Rev.
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**PROPOSED LOWER GROUND FLOOR PLAN**  
SCALE 1:50



**UNDERPINNING NOTES**

- U1. ALL REINFORCED CONCRETE CAST ON THE GROUND SHALL BE PLACED ON 50mm OF CONCRETE BLINDING IN A NOMINAL 1:8 MIX UNLESS OTHERWISE NOTED.
- U2. FOUNDATIONS HAVE BEEN DESIGNED TO IMPOSE A NET BEARING PRESSURE OF 100kN/m<sup>2</sup> ONTO A COHESIVE SOIL AT THE DEPTHS SHOWN. THE BEARING STRATA SHALL BE APPROVED BY THE LOCAL AUTHORITY'S BUILDING INSPECTOR BEFORE LAYING BLINDING OR CASTING FOUNDATIONS. ANY ADDITIONAL EXCAVATION SHALL BE REPLACED WITH A NOMINAL 1:8 MIX CONCRETE BUT IN THE EVENT OF EXTENSIVE ADDITIONAL EXCAVATION BEING REQUIRED, THE ENGINEER MUST BE INFORMED IMMEDIATELY AND FRESH INSTRUCTIONS OBTAINED.
- U3. CONCRETE MIX FOR FOUNDATIONS SHALL BE A 35N MIX WITH A MINIMUM 380kg OF SULPHATE RESISTING CEMENT PER CUBIC METRE AND A MAXIMUM WATER/CEMENT RATIO OF 0.45. CONCRETE SHALL BE LEFT FOR AT LEAST 48 HOURS BEFORE DRY PACKING.
- U4. CONCRETE COVER TO THE REINFORCEMENT SHALL BE AS DETAILED ON THE DRAWINGS BUT NEVER LESS THAN 35mm.

**UNDERPINNING NOTES - CONT**

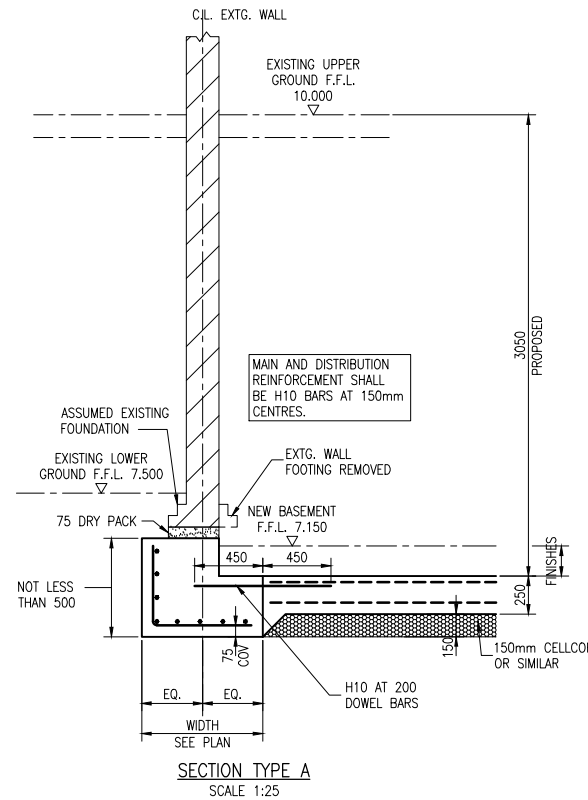
- U5. THE MINIMUM DEPTH OF THE UNDERPINNING (MEASURED FROM THE UNDERSIDE OF THE EXISTING FOOTING TO THE UNDERSIDE OF THE NEW) SHALL BE 500mm AND THE UNDERSIDE IS TO BE DUG TO A STRATA CAPABLE OF SUSTAINING A PERMISSIBLE NET GROUND PRESSURE OF 100kN/m<sup>2</sup>.
- U6. THE UNDERSIDE OF THE EXISTING WALL OR FOUNDATION SHALL BE TRIMMED AND CLEANED OF ALL MUD AND DEBRIS BEFORE DRY PACKING. THE DRY PACK SHALL BE A 1:3 MIX AND WELL RAMMED IN HORIZONTAL LAYERS NOT EXCEEDING 75mm THICK. DRY PACKING SHALL BE LEFT AT LEAST 24 HOURS BEFORE WORKS ARE COMMENCED ON ADJACENT UNDERPINS.
- U7. THE CENTRAL AREA OF EXCAVATION SHALL NOT TO BE CARRIED OUT UNTIL THE PERIMETER UNDERPINNING HAS BEEN COMPLETED.
- U8. BACKFILLING BEHIND LIGHTWELL RETAINING WALLS IF REQUIRED SHALL BE A 1:20 MIX USING SULPHATE RESISTING CEMENT.

PROVIDE CORNER BARS IN UNDERPINNING STEMS TO ENSURE MESH REINFT IS HELD IN PLACE DURING CONCRETING

WHERE UNDERPIN TOES OVERLAP AT CORNERS, MAIN REINFORCEMENT SHALL BE FULLY CONTINUOUS THROUGHOUT.

BASEMENT FLOOR SLAB SHALL BE 250mm THICK REINFORCED WITH A393 MESH IN TOP (40mm COVER) AND A252 MESH IN BOTTOM (75mm COVER). CAST ONTO 150mm THICK 'CELLCORE' OR SIMILAR APPROVED VOID FORMER.

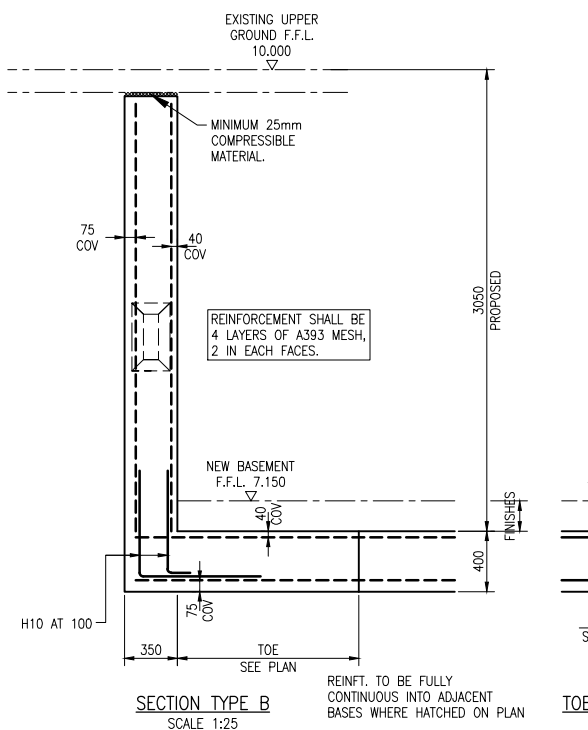
/// DENOTES WHERE UNDERPIN TOE MAIN AND DISTRIBUTION REINFORCEMENT SHALL BE FULLY CONTINUOUS THROUGHOUT.



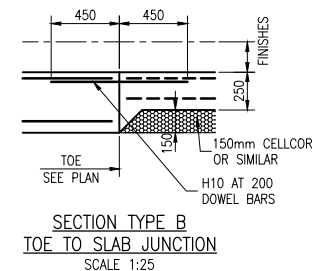
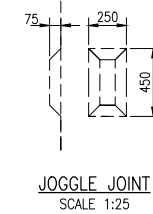
**SECTION TYPE A**  
TOE TO TOE JUNCTION  
SCALE 1:25

**REINFORCEMENT NOTE**  
WALL AND FOUNDATION REINFORCEMENT SHALL BE CONTINUOUS. IF LOOSE BARS ARE USED TO PROVIDE CONTINUITY THE AREA OF THE LOOSE BARS SHALL NOT BE LESS THAN THE AREA OF THE BARS SPECIFIED.  
LAPS SHALL NOT BE LESS THAN 45 TIMES THE LESSER BAR DIAMETER.

THE LEVELS INDICATED ON THE SECTIONS ARE FOR REFERENCE ONLY. ALL DIMENSIONS SHOULD BE CHECKED ON SITE PRIOR TO CONSTRUCTION.



**SECTION TYPE B**  
TOE TO SLAB JUNCTION  
SCALE 1:25



**SECTION TYPE B**  
TOE TO SLAB JUNCTION  
SCALE 1:25

**NOTES**

1. THIS DRAWING REMAINS THE COPYRIGHT OF MMP DESIGN AND IS NOT TO BE COPIED, ALTERED OR CHANGED WITHOUT PERMISSION.
2. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE NOTED.
3. DO NOT SCALE OFF THIS DRAWING.
4. ALL TEMPORARY WORKS SHALL BE THE RESPONSIBILITY OF THE MAIN CONTRACTOR BUT SHOULD ADVICE BE GIVEN BY THE ENGINEER, NO RESPONSIBILITY WILL BE ACCEPTED UNLESS THE ADVICE IS CONFIRMED IN WRITING BY THE CONTRACTOR PRIOR TO THE WORKS BEING CARRIED OUT
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE STABILITY OF THE EXISTING STRUCTURE AND EARTHWORKS ON THE SITE AND ADJOINING SITES AND MUST TAKE ALL NECESSARY PRECAUTIONS TO SAFEGUARD THIS. ADEQUATE SHORING SHALL BE INSTALLED DURING THE WORKS TO ENSURE STABILITY OF THE STRUCTURE AND SUCH SHORING IS TO BE ADEQUATELY FOUND.
6. ANY DEVIATION FROM THE DETAILS SHOWN MUST BE NOTIFIED TO THE ENGINEER BY THE CONTRACTOR IN WRITING BEFORE BEING CARRIED OUT.
7. THE LOCAL AUTHORITY'S BUILDING INSPECTOR AND THE ENGINEER ARE TO BE INFORMED BY THE CONTRACTOR IN WRITING AT LEAST 48 HOURS PRIOR TO THE WORKS STARTING ON SITE AND THEIR AGREEMENT OBTAINED THAT WORK CAN COMMENCE.
8. FIRE PROTECTION TO ALL STRUCTURAL MEMBERS SHALL ACHIEVE NOT LESS THAN A 1 HOUR STANDARD.
9. ALL NEW STRUCTURAL TIMBER SHALL BE GRADE SC4 (OR C24) TO BS. 4978 UNLESS OTHERWISE NOTED AND SHALL BE TREATED WITH AN APPROVED TIMBER PRESERVATIVE, INCLUDING CUT ENDS AND NOTCHES.
10. ALL STRUCTURAL STEELWORK SHALL BE MILD STEEL AND PAINTED WITH 1 COAT OF RED OXIDE AT THE FABRICATION WORKS AND 1 COAT ON SITE AFTER ERECTION, EACH COAT WITH A DRY FILM THICKNESS OF NOT LESS THAN 50 MICRONS. STEELWORK TO BE ENCASED IN CONCRETE SHALL BE UNPAINTED.
11. ALL STEELWORK CONNECTION DESIGNS AND FABRICATION DETAILS SHALL BE PREPARED BY THE APPOINTED SPECIALIST STEELWORK CONTRACTOR UNLESS OTHERWISE NOTED.
12. THE CONCRETE MIX FOR PADSTONES SHALL BE A 1:4 MIX.
13. BRICKWORK SHALL BE CONSTRUCTED USING BRICKS WITH A MINIMUM CRUSHING STRENGTH OF 27.5N/mm<sup>2</sup> AND BLOCKWORK SHALL BE CONSTRUCTED USING BLOCKS WITH A MINIMUM CRUSHING STRENGTH OF 2.8N/mm<sup>2</sup> UNLESS OTHERWISE NOTED. ALL MASONRY SHALL BE LAID IN CLASS (iii) MORTAR.

Rev.	Revision	Date

Client

Project

**31 HEATH DRIVE  
LONDON  
NW3 7SB**

Title

**PROPOSED BASEMENT EXTENSION  
AND ALTERATIONS  
STRUCTURAL DETAILS - SHEET 3**

Drawing Status:

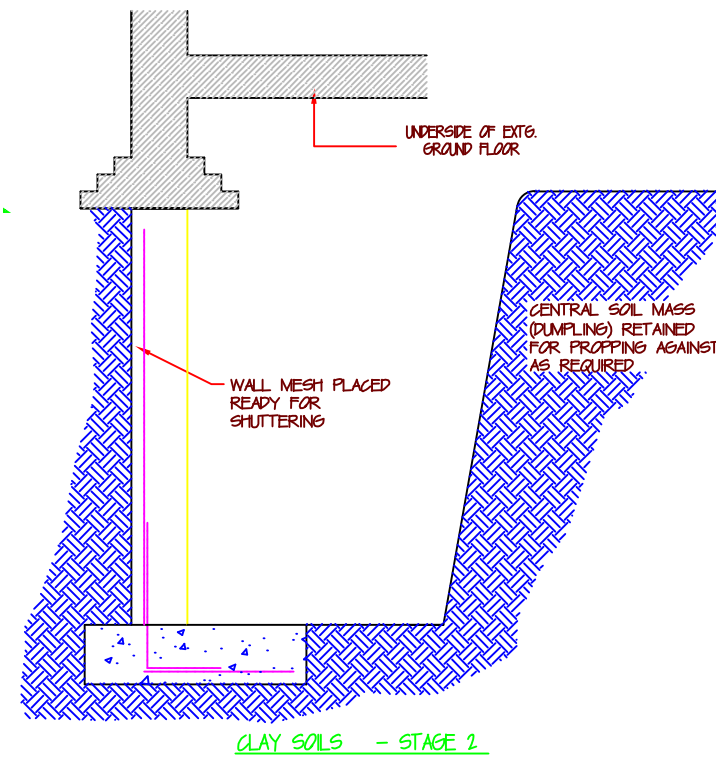
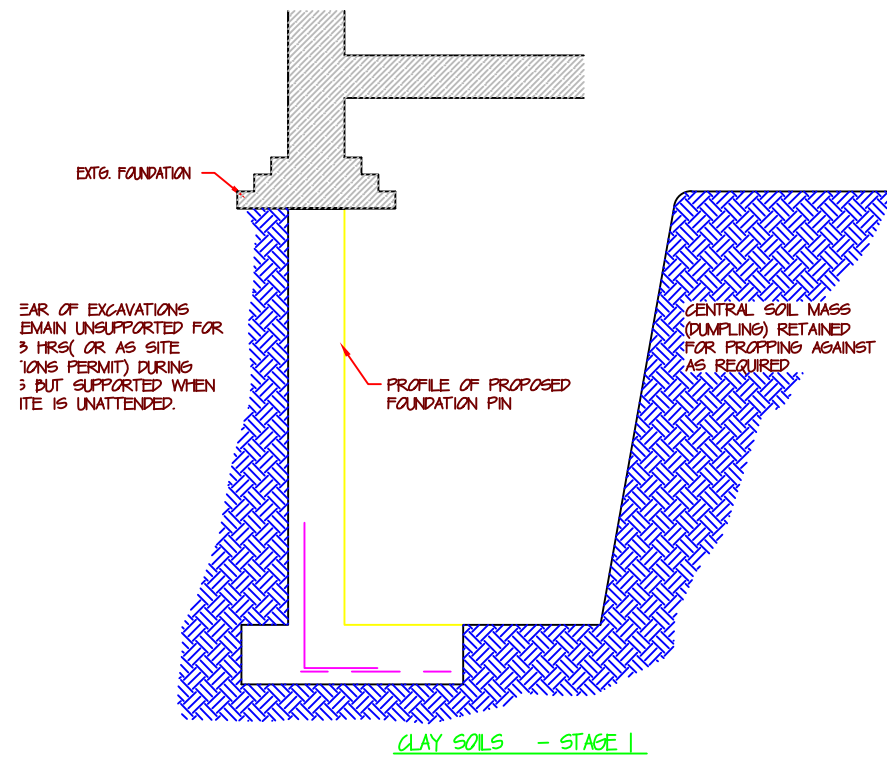
**BUILDING REGULATIONS**

Date: MAY/2105	Drawn by: SB
Scales: AS NOTED AT A1	Checked:

**MMP DESIGN**  
Consulting Civil & Structural Engineers

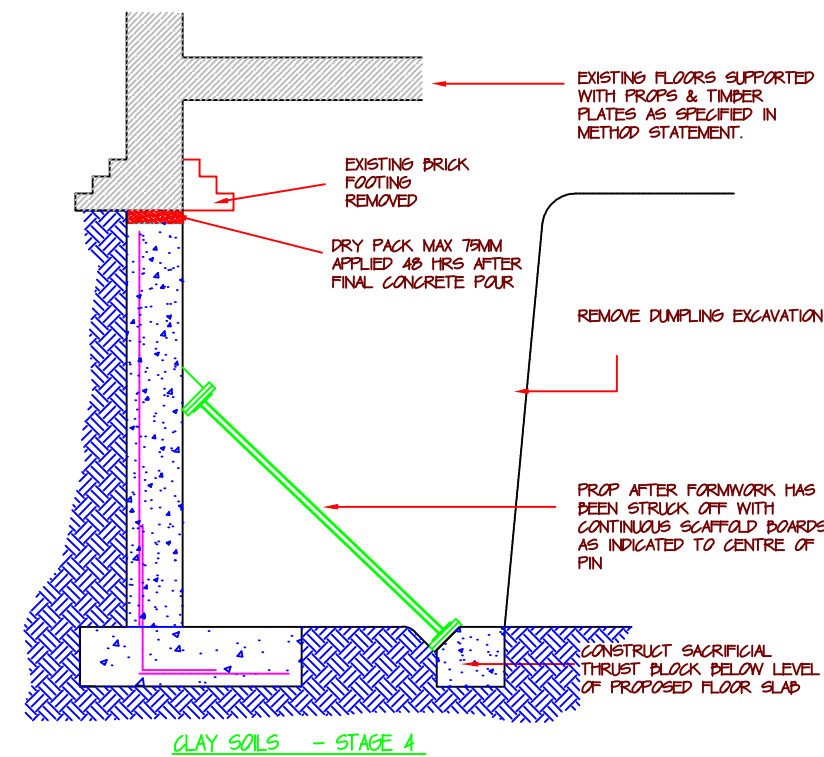
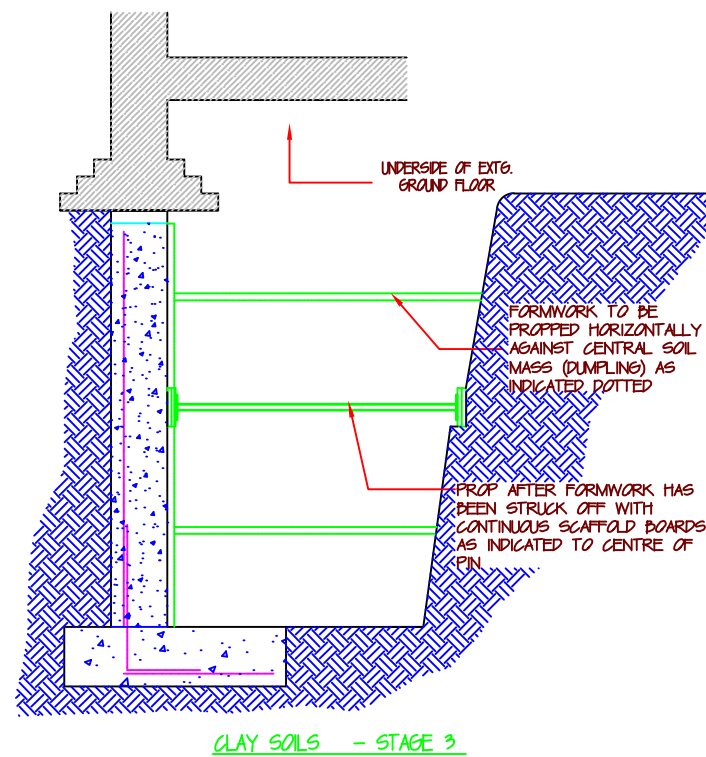
First Floor Unit 6  
Union Park  
Packet Boat Lane  
Uxbridge UB8 2GH  
Tel: 01895 430700 Fax: 01895 430550  
Email: mail@mmpdesign.co.uk

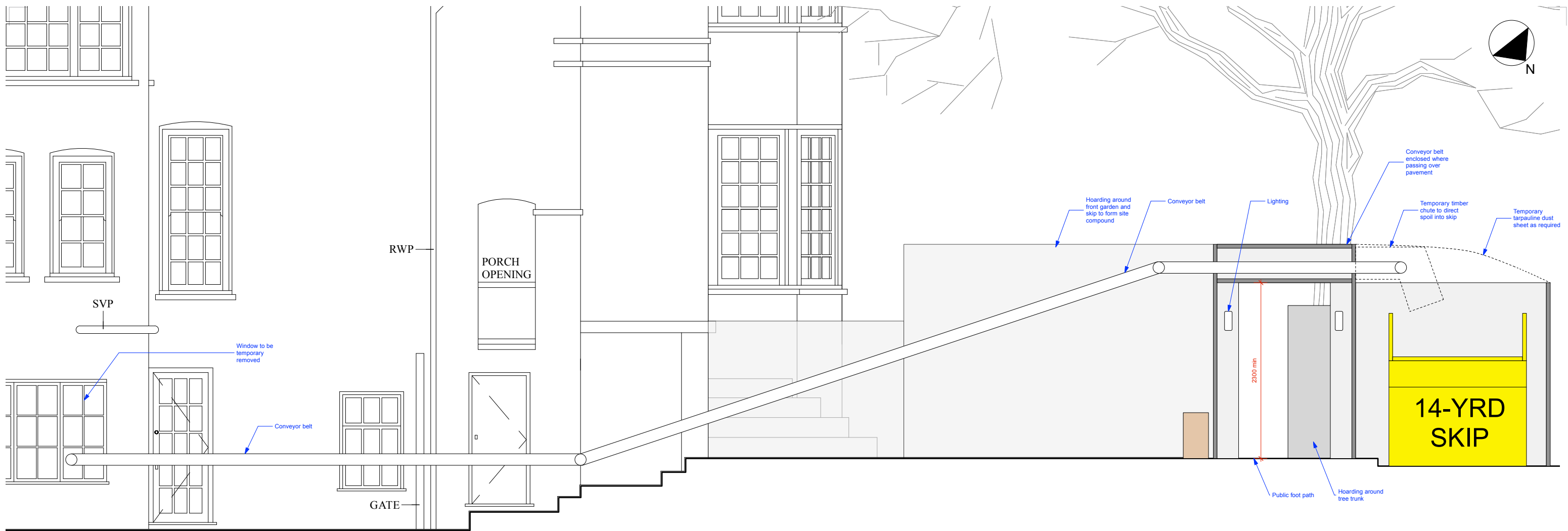
Job No. <b>4467</b>	Dwg. No. <b>03</b>	Rev.
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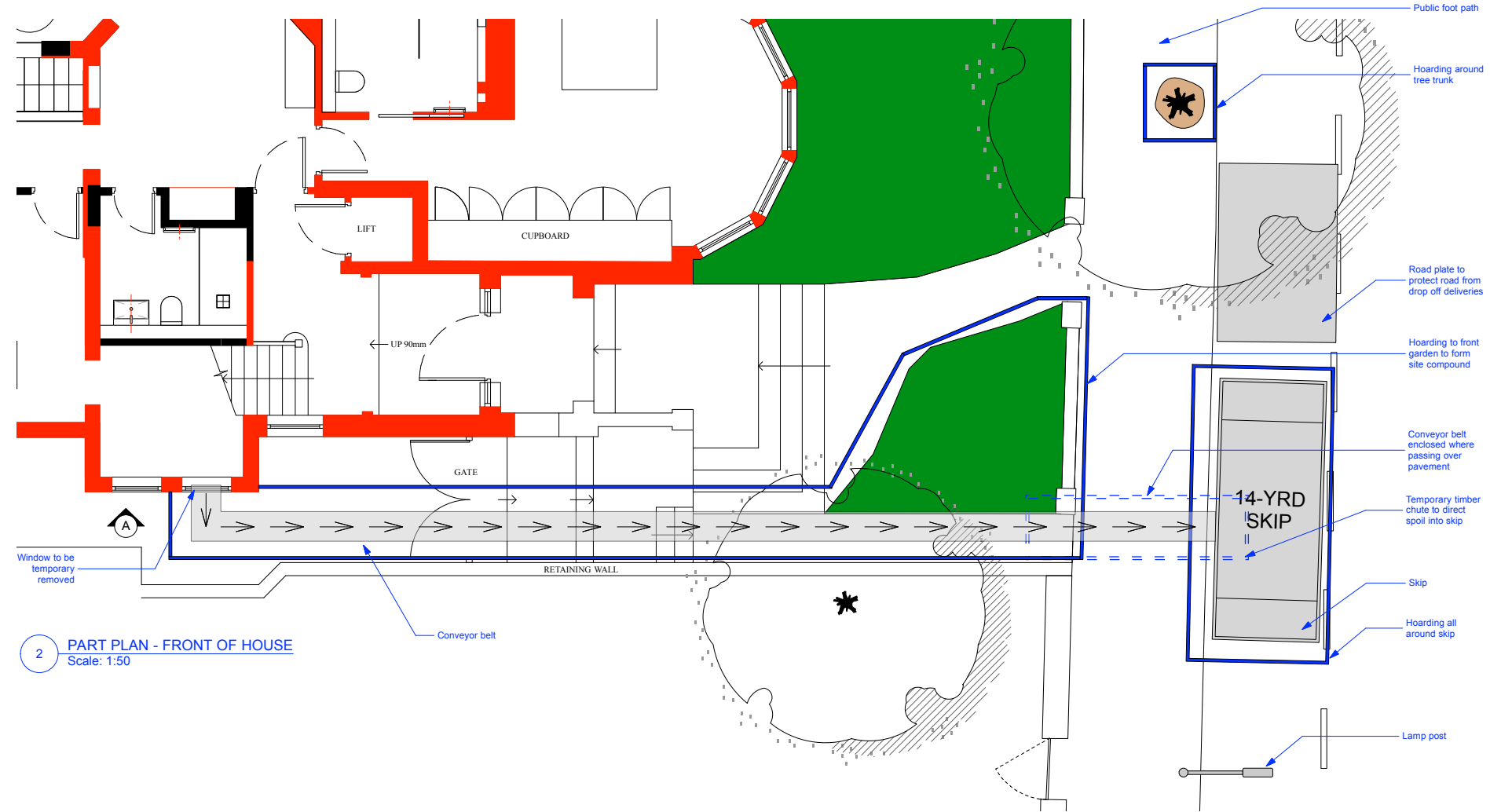
NOTE RE EXIST. FOUNDATIONS:  
THE STAGING OF THE REMOVAL OF EXISTING FOUNDATIONS/CORBELS MAY VARY FROM THE DRAWING (FOLLOWING SITE INVESTIGATION) REFER TO METHOD STATEMENT.

NOTE:  
WHERE THE UNDERSIDE OF THE EXISTING FOOTINGS IS FOUND TO BE UNSTABLE IE. IN THE CASE OF LOOSE BRICKWORK AS OPPOSED TO CONCRETE FOUNDATIONS, THEN THE UNDERSIDE IS TO BE SUPPORTED AS NECESSARY WITH A SACRIFICIAL PROP IF REQUIRED.





1 ELEVATION A  
Scale: 1:25



2 PART PLAN - FRONT OF HOUSE  
Scale: 1:50

ISSUE:	DATE:	COMMENT:
-	26.05.15	ISSUE FOR INFORMATION

<b>CallenderHoworth</b>		Morelands 5-23 Old Street London EC1V 9HL		T: 020 7336 8560 F: 020 7549 2152 W: www.callenderhoworth.com	
Job no.	Job title				
<b>1193</b>	FLAT 1, 31 HEATH DRIVE, LONDON NW3 7SB				
Drawing no.	Drawing title				
<b>110</b>	SITE SET UP				
Scale	Size	Drawn	Revision		
1:25 1:50	A3	KL	-		

All works to be in accordance with relevant standards, British building codes, and other relevant codes, and with manufacturers recommendations and instructions. All dimensions to be checked on site. Do not scale from this drawing.