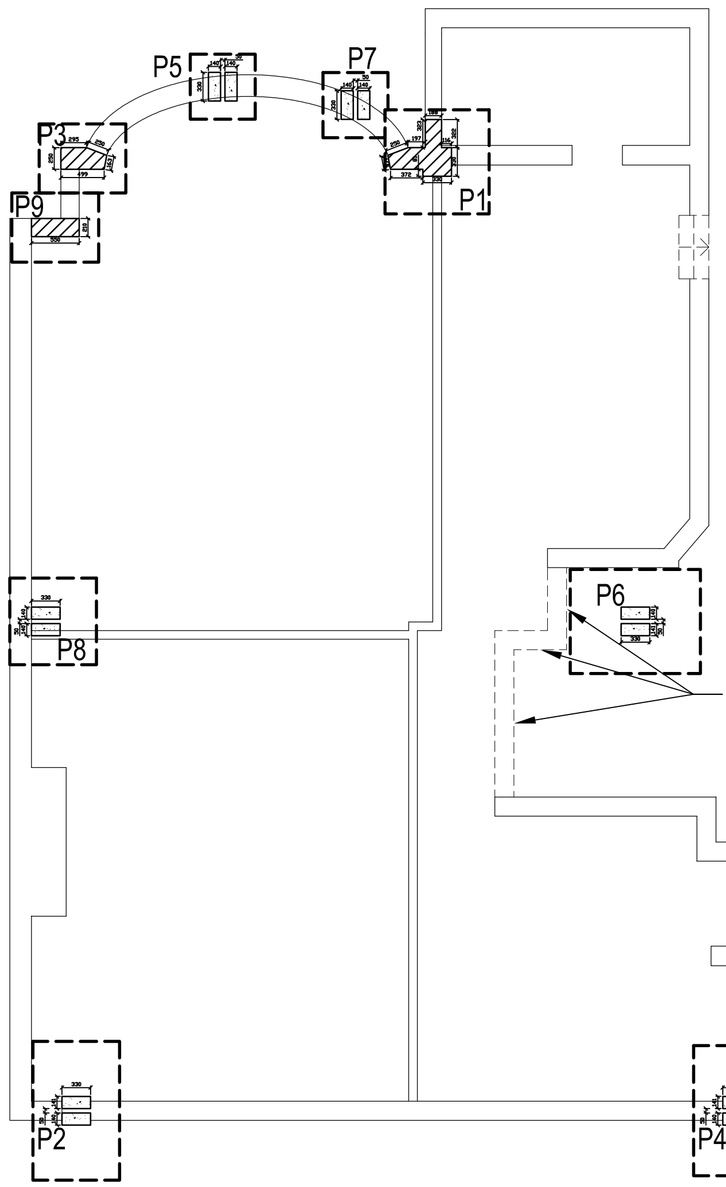
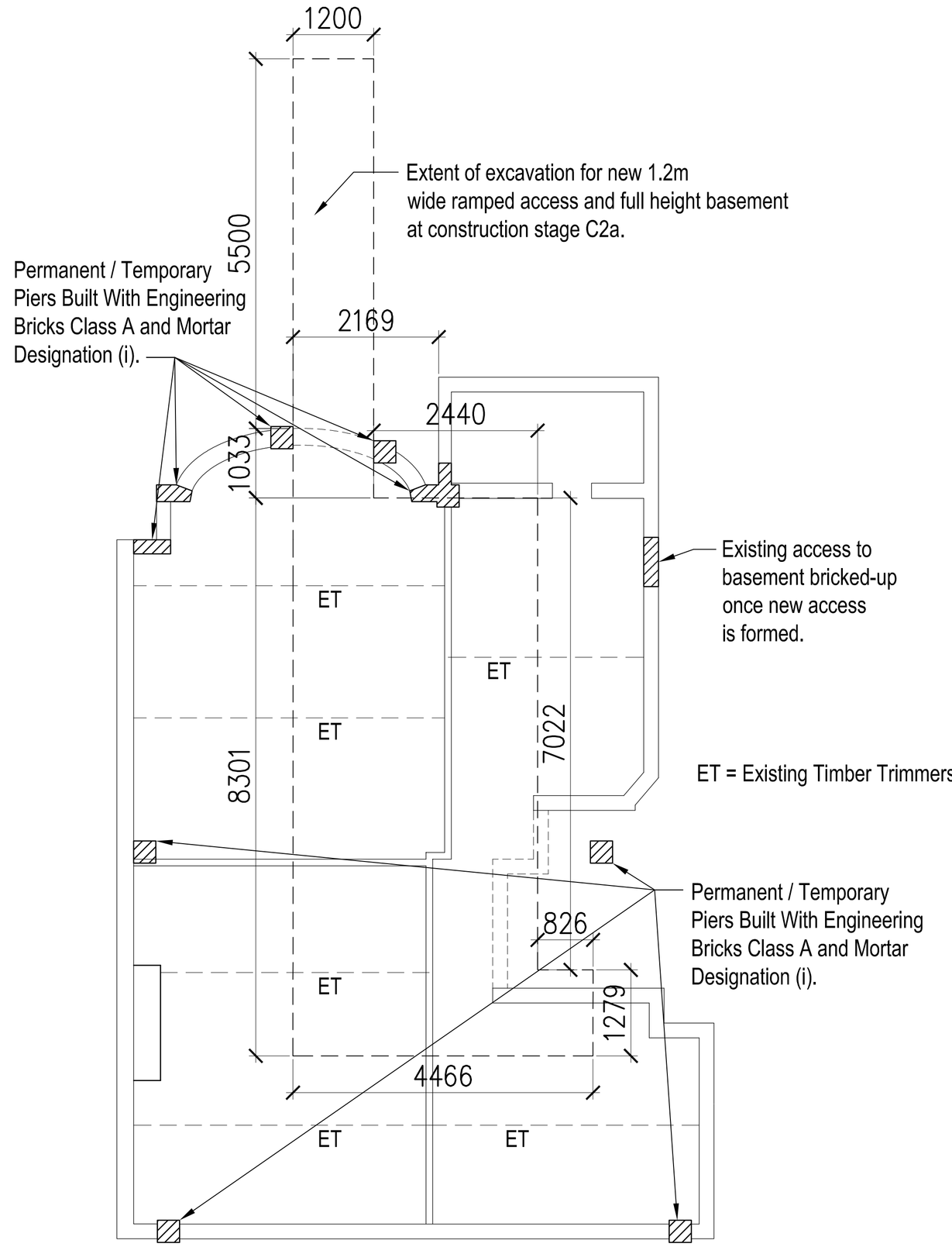
Provide the necessary temporary support and carefully remove part of the existing basement wall to make access for construction of pad foundation P6. Excavate & construct the 8 nos sacrificial pad foundations, starting from P1 to P9 in sequences. Once the concrete pad foundations have achieved adequate strength (usually after a week) then start building the engineering brick (Class A & Mortar Designation i) piers in the same sequences as the pad foundations. Engineering brick piers P4 to P8 are temporary until the under-pinning operation is complete.



Size of Concrete Pad-foundations:

P1 = 1.2m x 1.2m
P2 = 1.0m x 1.6m
P3 = 1.0m x 0.8m
P4 = 1.0m x 1.5m
P5 = 0.75m x 0.75m
P6 = 1.2m x 1.5m
P7 = 0.6m x 0.6m
P8 = 1.0m x 1.0m
P9 = 1.0m x 0.8m

EXISTING BASEMENT PLAN
Construction Stage C1 -
(Pad Foundations with (2 No. 140 x 330 x 300mm deep kickers with 50mm gap in between) & Engineering Brick Piers)



BASEMENT PLAN - Construction Stage C2a

Excavate to form new 1.2m wide ramped access to basement to the front of the building (within the gaps between new engineering brick piers P5 & P7). Then Block the existing access to basement with new bricks teeth into existing one at each side.

A1

GENERAL NOTES
Drawings to be read in conjunction with Architects Details and any other drawings, Bar Bending Schedule and Ground Investigation Report as appropriate

1) The contractor is to establish all dimensions on site.
2) All dimensions shown are in mm.
3) Discrepancies on this drawing to be reported to the Practice for clarification.
4) All proprietory products referred to in these drawings are to be installed/fixed strictly in accordance with the manufacturers details

STRUCTURAL STEELWORK
1) All structural steelwork is to comply with the provisions of BS 5950: Part 1 & 2 Structural Use of Steel in Buildings.
2) Materials workmanship and fabrication specification to comply with the Provisions of the National Structural Steelwork Specification for Building Construction - Third Edition, produced by BCSA & SCA.
3)The beams sections specified on the drawing are to comply with BS EN 10025:1990 Grade Fe 430B for Sections other than Hollow Sections and BS EN 10210-1 Grade S275J0H for Hollow Sections.
4) All beams are to be fireproofed to provide a minimum of **One** hour fire resistance where exposed.
5) Beams to be set on engineering brick piers or concrete padstones as indicated using concrete Grade C20 where supported by load bearing masonry walls with a Minimum bearing each end of 150mm.
6) Internal beams to receive one coat of Red Oxide Primer. External steelwork to be galvanised.
7) End Plate Connections not detailed on the drawings are to include 15mm end plates and minimum 4xM16, 8.8 Bolts.
12) Where not detailed on the drawings minimum fillet welds are to be 6mm continuous fillet welds.

REINFORCED CONCRETE
1) All concrete work is to comply with the provisions of BS8110 Part 1 The structural Use of Concrete.
2) The Contractor may purchase ready mixed concrete and/or mix concrete on site.
3) The grades of concrete to be used on site are C40 selected from BS 5328 Methods of Specifying Concrete and are to be Grade RC35/Gen 1/ST1
4) Cement, unless otherwise stated, is to be ordinary or rapid hardening Portland cement to BS 12.
5) Cement content 300kg/m3 with a maximum free water/cement ratio of 0.6.
6) Reinforcement is to be Hot Rolled H deformed type 2 Steel bars to BS4449 & BS 4461 Grade 500; and Fabric to BS 4483.
7) All steel bars to be clean and free from deleterious substances, loose rust or scale, or any coating that would impair the bond.
8) All reinforcement is to be fabricated as detailed on the bar bending schedules, cut and bent in accordance with BS 4466 and properly fixed in position with adequate chairs, spacers, tying wire etc to maintain the concrete cover specified.
9) Concrete cover to reinforcement to be a minimum of 40mm.
10) Minimum lap lengths of reinforcement:
H10- 400
H12 - 500
H16 - 640
H20 - 800
H25 - 1000
11) Mesh reinforcement lapped 400mm minimumi

FOUNDATION/RC SLAB
1) Semi-raft foundation RC Slab to be 300mm thick.
3) The foundations to be founded in the London Clay???.
7) A safe bearing capacity of 150KN/m2 can be/has been adopted for foundation design.
8) Appropriate Building Control Inspector or the Engineer to be informed for Inspection at Foundation Stage prior to concreting.
9) Concrete to the Foundations are to be Grade C40 with a minimum cement content of 275kg/m3 and a maximum free water/cement ratio of 0.65 for Class 1 sulphates conditions.

Underpinning
1) The Contractor shall be responsible for ensuring that the operations do not in any way impair the safety or condition of the existing structures.
2) Underpinning is to be carried out in short sections of about 900mm in length. The bottoms of the foundations shall be inspected and approved by appropriate Building Inspector before concrete is poured. The underpinning is to be carried out to the satisfaction of the Engineer and the Building Inspector.
3) Underpinning shall follow the sequence as indicated on the plan unless otherwise agreed on site.
4) Concreting to the underside of existing foundation may be undertaken in one operation without dry packing to achieve full contact with the base of the existing wall or by use of 75mm thick dry packing 1:1 cement:sand ensuring a full contact to the underside of the existing foundation.
5) A period of 24 hours must elapse from completion of concreting of one section to commencement of the next numbered section.
6) No section is to be commenced until the previous numbered section is totally completed.
7) The junctions of each section are to be connected by H10 bars at 200mm c/c in each face, to facilitate continuity of the reinforcement which project 300mm into each section. Where these dowels become exposed, during the following sections of underpinning, they are to be cleaned free of soil etc.
8) All excavations are to be kept free of water.
9) Concrete for underpinning is to be C40 to BS 5328 as for the retaining wall base.
10) The concrete shall be properly compacted using immersion vibrators and shall not take place when the temperature is below 5 degrees on a falling thermometer.

RETAINING WALLS - **DESIGN PARAMETERS**
1) Factor of Safety **2.0** against Rotation to BS8002, Sliding not critical as the RC Slab/Base will be continuous an balanced.
2) **Surcharge 10 KN/sq metre** (To BS5400)
3) Zero Water Pressure
5) Allowable bearing pressure 150 KN/sq metre
6) Angle of Internal Friction 35 degrees
7) Cover to rebar 40 to base; 50 to wall stem cavity
8) Concrete to base C40
9) Refer to Bar Bending Schedule ????
6) Brickworks to be Class A Engineering Bricks bonded with Mortar Designation (i).
7) The wall stem is to be constructed in maximum lifts of 1.0 metreswidth, concreting undertaken at least 24 hours after wall construction. The concrete infill is to be left at least one course below the top of the brickwork. Adequate temporary propping of the wall is to be provided to support the wall facing during concreting.

MASONRY WALLS
All brickwork and blockwork is to comply with the provisions of BS 5628: Part 3 Use of Masonry.

Lintels
1) All lintels to be selected to suit the particular load conditions.
2) Minimum 150 mm bearing for all lintels.
TEMPORARY SUPPORT WORKS
1) The contractor is to ensure safe temporary supports to the existing structures to facilitate installation of new lintels and or beams. Erection of falsework and needling is to be undertaken in such a manner as not to damage the supporting structures.
2) Falsework design is to take account of the loads indicated on the drawings or section details and is to be submitted to the Engineer prior to works commencing for assessment.
3) It is recommended that needles should comprise 152x89x16 UB steel beams placed at a maximum of 900mm centres with a maximum span of 1200mm between Acrow props or other support device each side of the wall to be supported
4) Acrow props must be taken down to firm supports which means that timber floors must not be used for base support unless also propped beneath.

TIMBER STRUCTURES
1) All new timber is to be Grade SC4 unless otherwise indicated on the drawings.
2) All Timber is to be Preservative Treated using an approved preservative as Protim 415 or similar.

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Client

Qaiser & Uzma

Drawing
PROPOSED BASEMENT CONVERSION
Structural G.A.'s
Basement Plans - Stages C1 & C2a

Project
46 The Avenue, London NN10 2QL

Scale 1:50 | Date March 2011 | Approved AA

Drawing no.
1030 - 01 - P1

STATUS: STATUS2