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Consulting Civil Engineers

2 Britannia Street, London WC1X 9JE

Facade Retention – Method Statement

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Ref: 140408 / I Prentice / G McLachlan

Date: 30 Jun 2015

Revision: 2

CCAS ISO 9001 Registered UKAS QUALITY MANAGEMENT 055 2010/586

CCAS ISO 14001 Registered UKAS ENVIRONMENTAL MANAGEMENT 055 2010/586

INVESTORS IN PEOPLE

1.0 INTRODUCTION

1.1 The proposed development of 2 Britannia Street consists of the conversion of an existing Victorian public house into residential flats. The existing rendered brick facade is to be retained however the existing internal structure is to be demolished, the basement lowered and a new internal, steel frame structure erected.

1.2 This document outlines a proposed sequence of construction / methodology for retaining the facade whilst the demolition of the existing structure takes place and the new works are constructed. This document should be read in conjunction with Conisbee drawings TW01 and TW02 which are appended to this document. Reference should also be made to Conisbee drawings S100, S101, S102, S103, S104, S105, S200, S201, S400, S410 and S420 which show the proposed structural works.

2.0 EXISTING BUILDING

2.1 The existing four storey (including basement) Victorian era public house is constructed of solid, load bearing, rendered brick external walls with timber floors and a flat roof. The internal structure is supported on steel beams which in turn are supported on columns or load bearing walls. The building has been heavily altered over its life with the roof, for example, being completely replaced. To the west of the building is a small enclosed courtyard.

2.2 The foundations consist of corbelled brick footings bearing on concrete strips. Site investigation works consisting of a borehole and trial pits have found the underlying strata to consist of fill over clay and gravel over clay to depth.

3.0 PROPOSALS

3.1 The proposals are to convert the property into residential flats. The facade is to be retained and a new internal, load bearing steel frame with composite metal deck floor slabs installed within it. The basement is to be lowered to provide suitable head room and an additional storey constructed by introducing a mansard type roof.

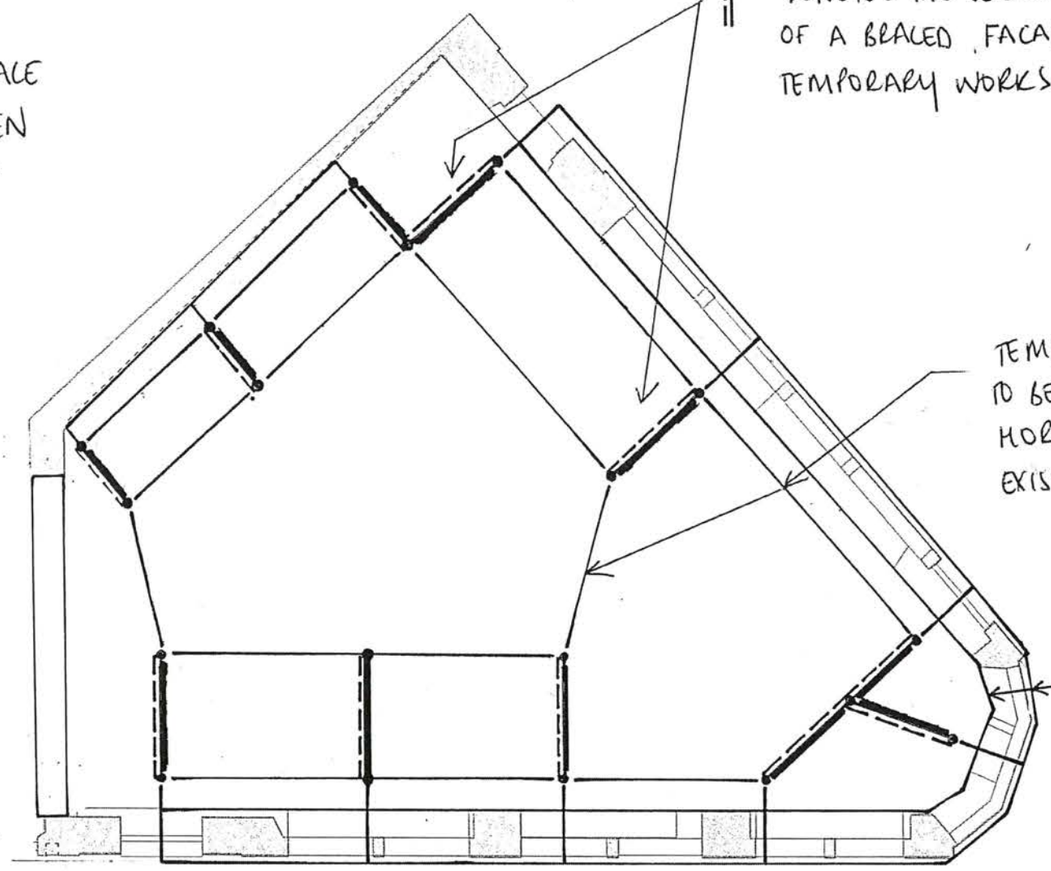
3.2 The retained walls are to be underpinned and a new reinforced concrete raft slab constructed to form the new foundation to the frame. A new basement plant room is to be constructed and above / adjacent to this the existing courtyard is to be in-filled with a three-storey, steel framed structure with composite metal deck floor slabs and roof. This will be supported on piled foundations.

4.0 METHOD STATEMENT

The following outlines a method for retention of the existing facade to 2 Britannia Street and the construction of the new permanent works.

1. Carry-out soft strip.
2. Underpin the existing facade, party wall and vault walls to a depth below the proposed formation level of the new foundation – refer to stage 1 of drawing TW02. Underpinning is to be carried out in a controlled sequence in bays not greater than 1m in length.
3. Carry out remedial repairs to the facade as necessary and install temporary timber cross bracing to windows / openings etc.
4. Install temporary pad foundations at the locations of the proposed facade retention frames – see drawing TW01.
5. Install temporary propping to basement walls in the form of wallings and diagonal props off of the temporary pad foundations - refer to stage 1 of drawing TW02.
6. Reduce level of remainder of existing basement down to the formation level of the new foundations.
7. Install facade retention temporary works- these are to consist of vertical braced steel frames with continuous wallings clamped to the facade at each floor and at roof level - refer to stage 2 of drawing TW02.
8. Cast new RC raft slab and new retaining walls at basement level - refer to stage 3 of drawing TW02 and S100.
9. Carefully remove existing internal structure from roof down - refer to stage 3 of drawing TW02.
10. Install new internal steel frame then cast new concrete / metal deck composite slabs sequentially from ground to third floor level - refer to stage 4 of drawing TW02 and drawings S100 – S105.
11. Tie the existing facade to the new steel frame – refer to drawing S410 for typical tie details.
12. Once the facade is tied to the new frame, the temporary works can be removed along with the basement wall props - refer to stage 5 of drawing TW02.

NOTE: REFER TO DRAWING TW02 FOR PROPOSED SEQUENCE FOR THE FACADE RETENTION TEMPORARY WORKS.
FACADE RETENTION TO REMAIN IN-PLACE UNTIL NEW STEEL STRUCTURE HAS BEEN ELECTED, COMPOSITE FLOOR SLABS CAST AND FACADE TIED BACK TO THE NEW STRUCTURE.



NOTE: THIS DRAWING INDICATES A SUGGESTED TEMPORARY WORKS SCHEME ONLY. THE MAIN CONTRACTOR IS RESPONSIBLE FOR THE PREPARATION, DESIGN & INSTALLATION OF ANY TEMPORARY WORKS (INCLUDING FACADE RETENTION WORKS). THE CONTRACTOR MUST SUBMIT TO THE STRUCTURAL ENGINEER, IN ADVANCE OF THE WORKS STARTING, DETAILS OF THEIR PROPOSED FACADE RETENTION SCHEME TO ENABLE COMMENT WHICH IS TO INCLUDE ALL RELEVANT DRAWINGS & CALCULATIONS AS WELL AS A SEQUENCE OF WORKS AND METHOD STATEMENT.

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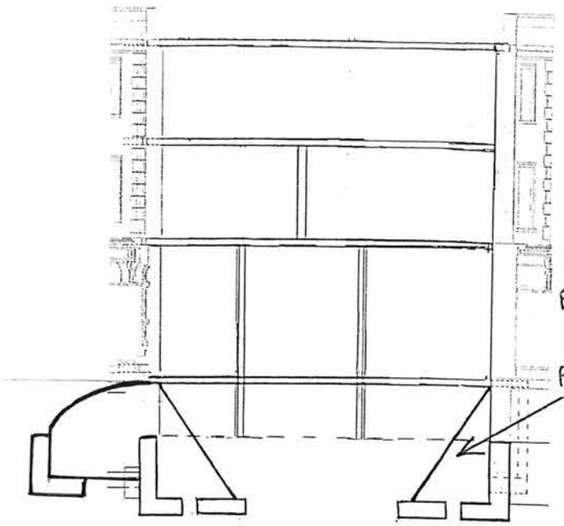
Project: 2 BRITANNIA ST.	Job No. 140408
	Drg. No. TW01
Title: PROPOSED SCHEME FOR FACADE RETENTION TEMP. WORKS - PLAN.	Scale NTS.
	Date 11/6/15.
	Drawn GMT.
Status: PRELIMINARY.	Checked

Revision

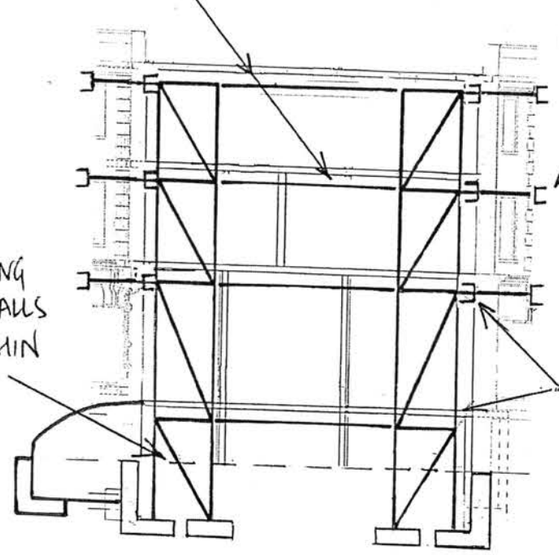


TEMPORARY PROPPING FOR BASEMENT WALLS INCORPORATED WITHIN FACADE RETENTION WORKS.

1. UNDERPIN EXTERNAL FACADE & INSTALL TEMPORARY PAD FOUNDATIONS.

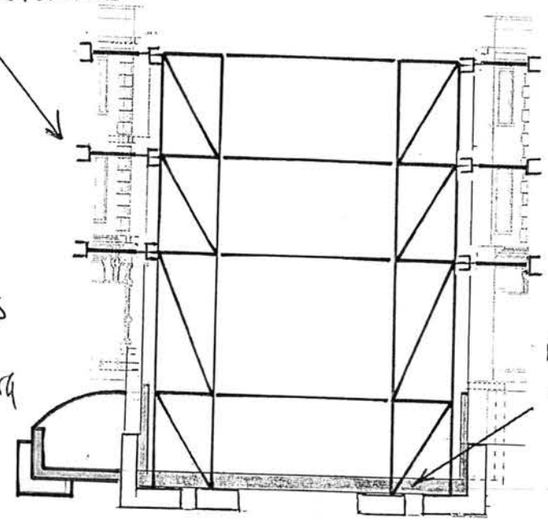
TEMPORARY STRUCTURES TO BE TIED TOGETHER BELOW EXISTING FLOOR LEVELS.

TEMPORARY WORKS TO BE CLAMPED TO FACADE AT ALL UPPER LEVELS THROUGH EXISTING WINDOW OPENINGS.



TEMPORARY WORKS TO LOCALLY PUNCH THROUGH EXISTING FLOORS.

2. ERECT FACADE RETENTION TEMPORARY WORKS.

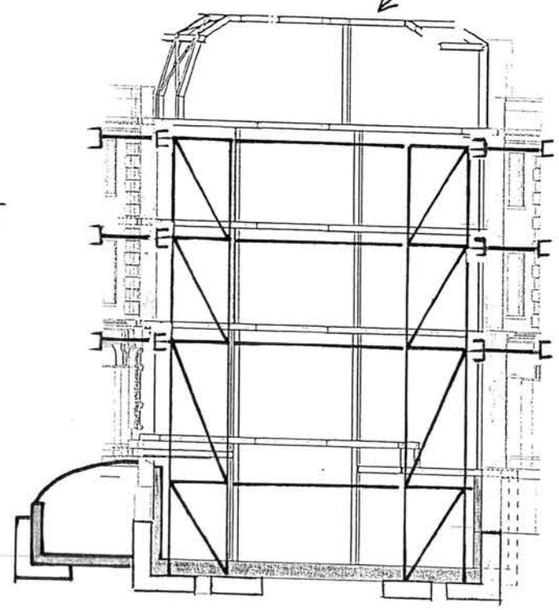


RC RAFT SLAB TO BE CAST AROUND TEMPORARY WORKS.

3. REMOVE EXISTING INTERNAL STRUCTURE & CAST RC RAFT SLAB & RETAINING WALLS.

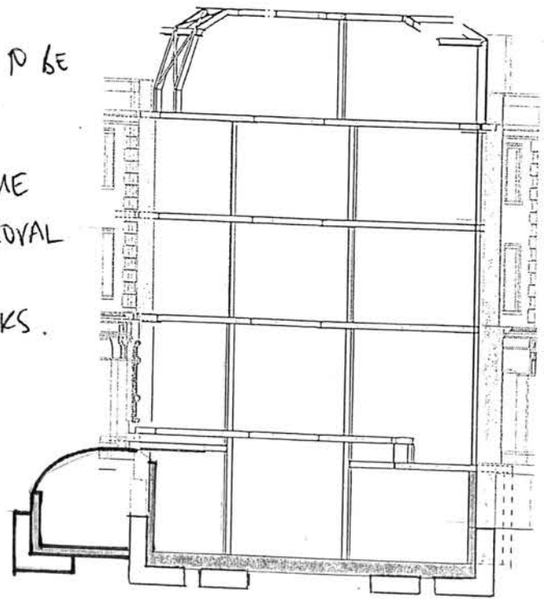
FACADE RETENTION TEMPORARY WORKS TO REMAIN IN-PLACE WHILST NEW INTERNAL STRUCTURE IS CONSTRUCTED.

NEW ROOF CONSTRUCTED.



4. ERECT STEEL FRAME & CAST COMPOSITE METAL DECK FLOORS.

EXISTING FACADE TO BE PERMEANTLY TIED BACK TO NEW STRUCTURAL FRAME PRIOR TO THE REMOVAL OF THE FACADE RETENTION WORKS.



5. REMOVE TEMPORARY WORKS.

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Project 2 BRITANNIA ST.	Job No. 140408
	Drg. No. TW02.
Title PROPOSED SCHEME FOR FACADE RETENTION TEMP. WORK - SEQUENCE OF WORKS	Scale NTS.
	Date 11/6/15.
	Drawn AM.
Status PRELIMINARY.	Checked

STEELWORK NOTES

1. ALL STEEL TO BE GRADE S275 EXCEPT CIRCULAR / BOX SECTION COLUMNS WHICH ARE TO BE GRADE S355.

2. REFER TO STRUCTURAL SPECIFICATION FOR DETAILS OF PAINT FINISHES TO STEELWORK.

3. ALL 'BEAM TO BEAM' AND 'BEAM TO COLUMN' CONNECTIONS ARE TO BE FORMED USING A MINIMUM OF 2No. M16 GRADE 8.8 BOLTS.

4. ALL WELDED CONNECTIONS ARE TO BE FORMED USING 6mm FILLET WELD AS A MINIMUM.

5. ALL STEEL TO STEEL AND BASEPLATE CONNECTIONS ARE TO BE DESIGNED AND DETAILED BY THE SPECIALIST SUB-CONTRACTOR. REFER TO THE SPECIFICATIONS FOR FURTHER DETAILS. IN ADDITION TO GRAVITY AND WIND LOADS etc. ALL CONNECTIONS ARE TO BE DESIGNED TO RESIST TIE FORCE LOADS IN ACCORDANCE WITH THE BUILDING REGULATIONS REQUIREMENTS FOR PROGRESSIVE COLLAPSE. FOR TENDER PURPOSES ALLOW FOR AN UNFACTORED LOAD OF 75kN.

6. CONNECTION LOADS/MOMENTS - FOR TENDER PURPOSES ASSUME THE FOLLOWING: (ALL LOADS & MOMENT ARE FACTORED).

MOMENT = 50kNm
SHEAR = 120kN
AXIAL (T/C) = 20kN

7. FIRE PROTECTION TO STEELWORK TO ARCHITECTS DETAILS.

8. ALL WATERPROOFING AND TANKING TO ARCHITECTS DETAILS.

CONCRETE NOTES

1. CONCRETE FOR ALL REINFORCED FOUNDATIONS & GROUND FLOOR SLABS TO BE GRADE RC 40 DESIGNATED MIX TO BS 8500.

2. CONCRETE FOR UNDERPINNING / MASS CONCRETE FOUNDATIONS TO BE FND 3. DESIGNATED MIX TO BS 8500.

3. CONCRETE FOR SUPER STRUCTURE WORKS TO BE GRADE RC 40 DESIGNATED MIX TO BS 8500.

4. ALL REINFORCEMENT INCLUDING MESH TO BE HIGH YIELD GRADE 500 C TO BS 4449:2005.

5. REFER TO SPECIFICATION FOR DETAILS OF CONCRETE TESTING.

6. ALL WATERPROOFING TO ARCHITECTS DETAILS.

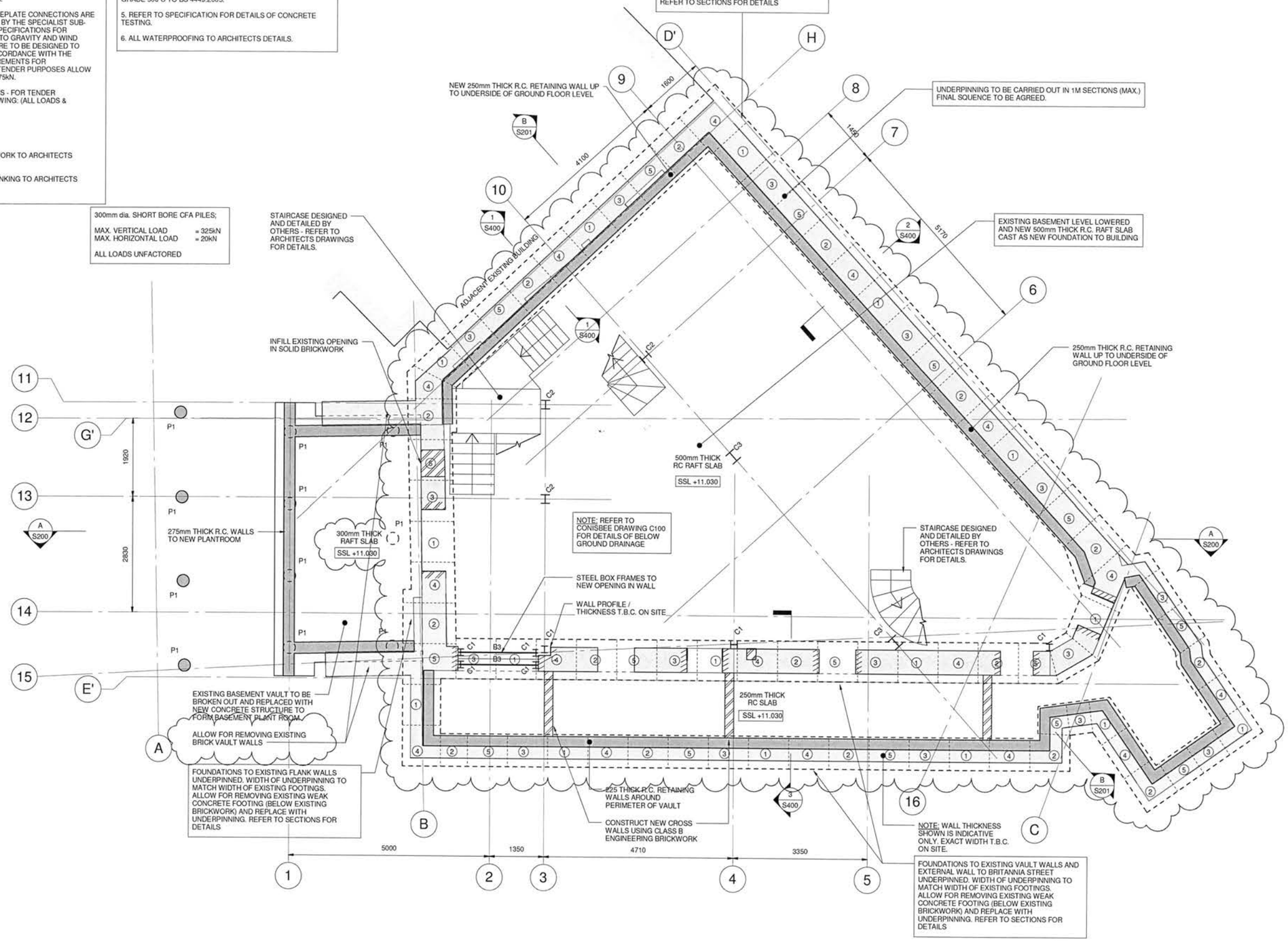
STRUCTURAL ALTERATION WORKS TO EXISTING TERRACES AND PUBLIC HOUSE

1. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND INSTALLATION OF ALL TEMPORARY WORKS. THEIR PROPOSALS MUST BE SUBMITTED TO THE STRUCTURAL ENGINEER SUFFICIENTLY IN ADVANCE OF THE WORKS STARTING TO PERMIT COMMENT. UNDER NO CIRCUMSTANCES SHOULD ANY STRUCTURAL ALTERATIONS BE CARRIED OUT PRIOR TO THE STRUCTURAL ENGINEER COMMENTING ON THE CONTRACTORS TEMPORARY WORKS PROPOSALS.

300mm dia. SHORT BORE CFA PILES;

MAX. VERTICAL LOAD = 325kN
MAX. HORIZONTAL LOAD = 20kN

ALL LOADS UNFACTORED



GENERAL NOTES

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2. DO NOT SCALE FROM THIS DRAWING IN EITHER PAPER OR DIGITAL FORM. USE WRITTEN DIMENSIONS ONLY.

STRUCTURAL COLUMN SCHEDULE	
MARK	DESCRIPTION
C1	UC152x152x37
C2	UC203x203x60
C3	UC254x254x107
C4	UC203x203x46
C5	CHS139.7x10

STRUCTURAL BEAM SCHEDULE	
MARK	DESCRIPTION
B1	UC203x203x60
B2	UC305x305x97
B3	UC254x254x89
B4	UB203x133x30
B5	UC203x203x86
B6	UB305x127x37
B7	UC203x203x46
B8	200x90x30 PFC
B9	RHS200x120x10.0

* - DENOTES CRANKED BEAM

NOTE:
12mm THICK PLATE TO BE WELDED TO UNDERSIDE OF ALL BEAMS SUPPORTING R.C. COMPOSITE SLABS - PLATES TO BE 200mm WIDER THAN WIDTH OF BEAM.

STRUCTURAL BRACING SCHEDULE	
MARK	DESCRIPTION
BR1	10x100mm FLAT

LEGEND

- STEP — STEP IN LEVEL
- B — DENOTES STEEL BEAM
- DENOTES MOMENT CONNECTION BETWEEN STEEL MEMBERS
- BR — DENOTES STEEL CROSS BRACING
- DIRECTION OF SPAN OF 200mm THICK COMPOSITE R.C. SLABS CONSTRUCTED USING RC 40 CONCRETE AND KINGSPAN MD80 V2 1.1mm THICK DECKING WITH 1 LAYER A193 MESH AND 1no. H12 BAR PER TROUGH.
- DIRECTION OF SPAN OF 200x50mm C16 TIMBER JOISTS @ 400mm c/c SHEATHED IN 18mm PLYWOOD
- DIRECTION OF SPAN OF 250mm THICK CAST IN-SITU R.C. SLAB
- DIRECTION OF SPAN OF 125x50mm C16 TIMBER JOISTS @ 400mm c/c
- EXISTING MASONRY STRUCTURE
- EXISTING MASONRY MADE GOOD
- NEW BRICKWORK
- NEW BLOCKWORK
- × CONNECTION POINT OF MANSARD ROOF BEAMS

NOT FOR CONSTRUCTION

Rev	Date	Description	Drawn	Check
T2	30.06.15	REVISED AS CLOUDED	KDE	IP
T1	22.06.15	ISSUED FOR TENDER	KDE	IP

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Drawing Status: TENDER

Project: 2 Britannia Street, London WC1X 9JE

Title: GENERAL ARRANGEMENT - BASEMENT

Date JAN 2015
Scale 1 : 50
Drawn KDE
Engineer IP
Project No 140408
Drawing No S100
Revision T2

STEELWORK NOTES

1. ALL STEEL TO BE GRADE S275 EXCEPT CIRCULAR / BOX SECTION COLUMNS WHICH ARE TO BE GRADE S355.

2. REFER TO STRUCTURAL SPECIFICATION FOR DETAILS OF PAINT FINISHES TO STEELWORK.

3. ALL 'BEAM TO BEAM' AND 'BEAM TO COLUMN' CONNECTIONS ARE TO BE FORMED USING A MINIMUM OF 2No. M16 GRADE 8.8 BOLTS.

4. ALL WELDED CONNECTIONS ARE TO BE FORMED USING 6mm FILLET WELD AS A MINIMUM.

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6. CONNECTION LOADS/MOMENTS - FOR TENDER PURPOSES ASSUME THE FOLLOWING: (ALL LOADS & MOMENT ARE FACTORED).

MOMENT = 50kNm
SHEAR = 120kN
AXIAL (T/C) = 20kN

7. FIRE PROTECTION TO STEELWORK TO ARCHITECTS DETAILS.

8. ALL WATERPROOFING AND TANKING TO ARCHITECTS DETAILS.

CONCRETE NOTES

1. CONCRETE FOR ALL REINFORCED FOUNDATIONS & GROUND FLOOR SLABS TO BE GRADE RC 40 DESIGNATED MIX TO BS 8500.

2. CONCRETE FOR UNDERPINNING / MASS CONCRETE FOUNDATIONS TO BE FND 3. DESIGNATED MIX TO BS 8500.

3. CONCRETE FOR SUPER STRUCTURE WORKS TO BE GRADE RC 40 DESIGNATED MIX TO BS 8500.

4. ALL REINFORCEMENT INCLUDING MESH TO BE HIGH YIELD GRADE 500 C TO BS 4449:2005.

5. REFER TO SPECIFICATION FOR DETAILS OF CONCRETE TESTING.

6. ALL WATERPROOFING TO ARCHITECTS DETAILS.

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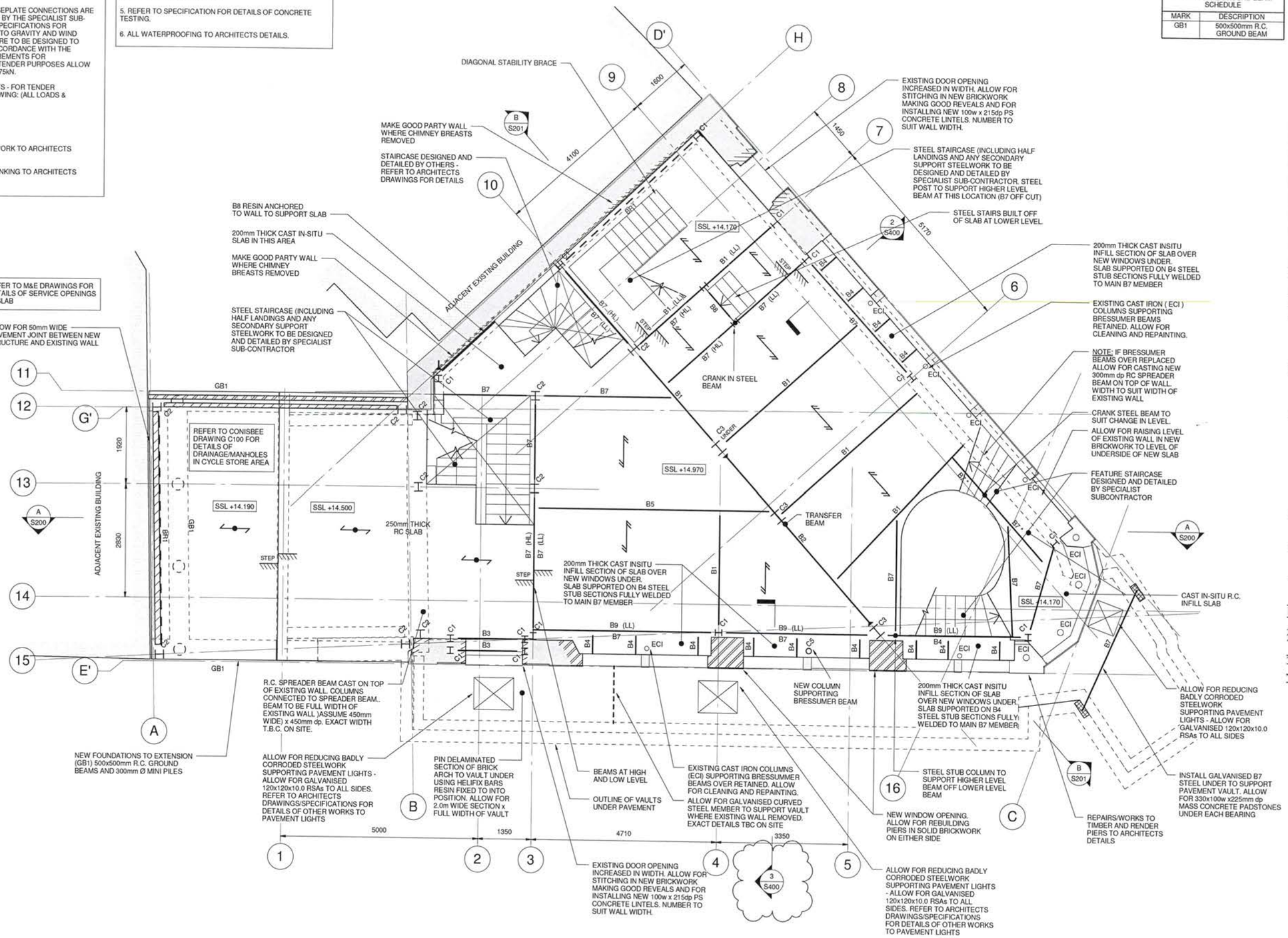

STRUCTURAL GROUND BEAM SCHEDULE

MARK	DESCRIPTION
GB1	500x500mm R.C. GROUND BEAM

STRUCTURAL COLUMN SCHEDULE

MARK	DESCRIPTION
C1	UC152x152x37
C2	UC203x203x60
C3	UC254x254x107
C4	UC203x203x46
C5	CHS139.7x10

STRUCTURAL BEAM SCHEDULE

MARK	DESCRIPTION
B1	UC203x203x60
B2	UC305x305x97
B3	UC254x254x89
B4	UB203x133x30
B5	UC203x203x86
B6	UB305x127x37
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B8	200x90x30 PFC
B9	RHS200x120x10.0

* - DENOTES CRANKED BEAM

NOTE:
12mm THICK PLATE TO BE WELDED TO UNDERSIDE OF ALL BEAMS SUPPORTING R.C. COMPOSITE SLABS - PLATES TO BE 200mm WIDER THAN WIDTH OF BEAM.

STRUCTURAL BRACING SCHEDULE

MARK	DESCRIPTION
BR1	10x100mm FLAT

GENERAL NOTES

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS, ENGINEERS AND SPECIALIST DRAWINGS AND SPECIFICATIONS
2. DO NOT SCALE FROM THIS DRAWING IN EITHER PAPER OR DIGITAL FORM. USE WRITTEN DIMENSIONS ONLY.

LEGEND

- STEP — STEP IN LEVEL
- B — DENOTES STEEL BEAM
- DENOTES MOMENT CONNECTION BETWEEN STEEL MEMBERS
- BR — DENOTES STEEL CROSS BRACING
- DIRECTION OF SPAN OF 200mm THICK COMPOSITE R.C. SLABS CONSTRUCTED USING RC 40 CONCRETE AND KINGSPAN MD80 V2 1.1mm THICK DECKING WITH 1 LAYER A193 MESH AND 1no. H12 BAR PER TROUGH.
- DIRECTION OF SPAN OF 200x50mm C16 TIMBER JOISTS @ 400mm c/c SHEATHED IN 18mm PLYWOOD
- DIRECTION OF SPAN OF 250mm THICK CAST IN-SITU R.C. SLAB
- DIRECTION OF SPAN OF 125x50mm C16 TIMBER JOISTS @ 400mm c/c
- EXISTING MASONRY STRUCTURE
- EXISTING MASONRY MADE GOOD
- NEW BRICKWORK
- NEW BLOCKWORK
- × CONNECTION POINT OF MANSARD ROOF BEAMS

NOT FOR CONSTRUCTION

Rev	Date	Description	Drawn	Check
T2	30.06.15	REVISED AS CLOUDED	KDE	IP
T1	22.06.15	ISSUED FOR TENDER	KDE	IP

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Drawing Status: TENDER

Project: 2 Britannia Street, London WC1X 9JE

Title: GENERAL ARRANGEMENT - GROUND FLOOR

Date JAN 2015
Scale 1 : 50
Drawn KDE
Engineer IP
Project No 140408
Drawing No S101
Revision T2

STEELWORK NOTES

1. ALL STEEL TO BE GRADE S275 EXCEPT CIRCULAR / BOX SECTION COLUMNS WHICH ARE TO BE GRADE S355.

2. REFER TO STRUCTURAL SPECIFICATION FOR DETAILS OF PAINT FINISHES TO STEELWORK.

3. ALL 'BEAM TO BEAM' AND 'BEAM TO COLUMN' CONNECTIONS ARE TO BE FORMED USING A MINIMUM OF 2No. M16 GRADE 8.8 BOLTS.

4. ALL WELDED CONNECTIONS ARE TO BE FORMED USING 6mm FILLET WELD AS A MINIMUM.

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MOMENT = 50kNm
SHEAR = 120kN
AXIAL (T/C) = 20kN

7. FIRE PROTECTION TO STEELWORK TO ARCHITECTS DETAILS.

8. ALL WATERPROOFING AND TANKING TO ARCHITECTS DETAILS.

CONCRETE NOTES

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2. CONCRETE FOR UNDERPINNING / MASS CONCRETE FOUNDATIONS TO BE FND 3. DESIGNATED MIX TO BS 8500.

3. CONCRETE FOR SUPER STRUCTURE WORKS TO BE GRADE RC 40 DESIGNATED MIX TO BS 8500.

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STRUCTURAL ALTERATION WORKS TO EXISTING TERRACES AND PUBLIC HOUSE

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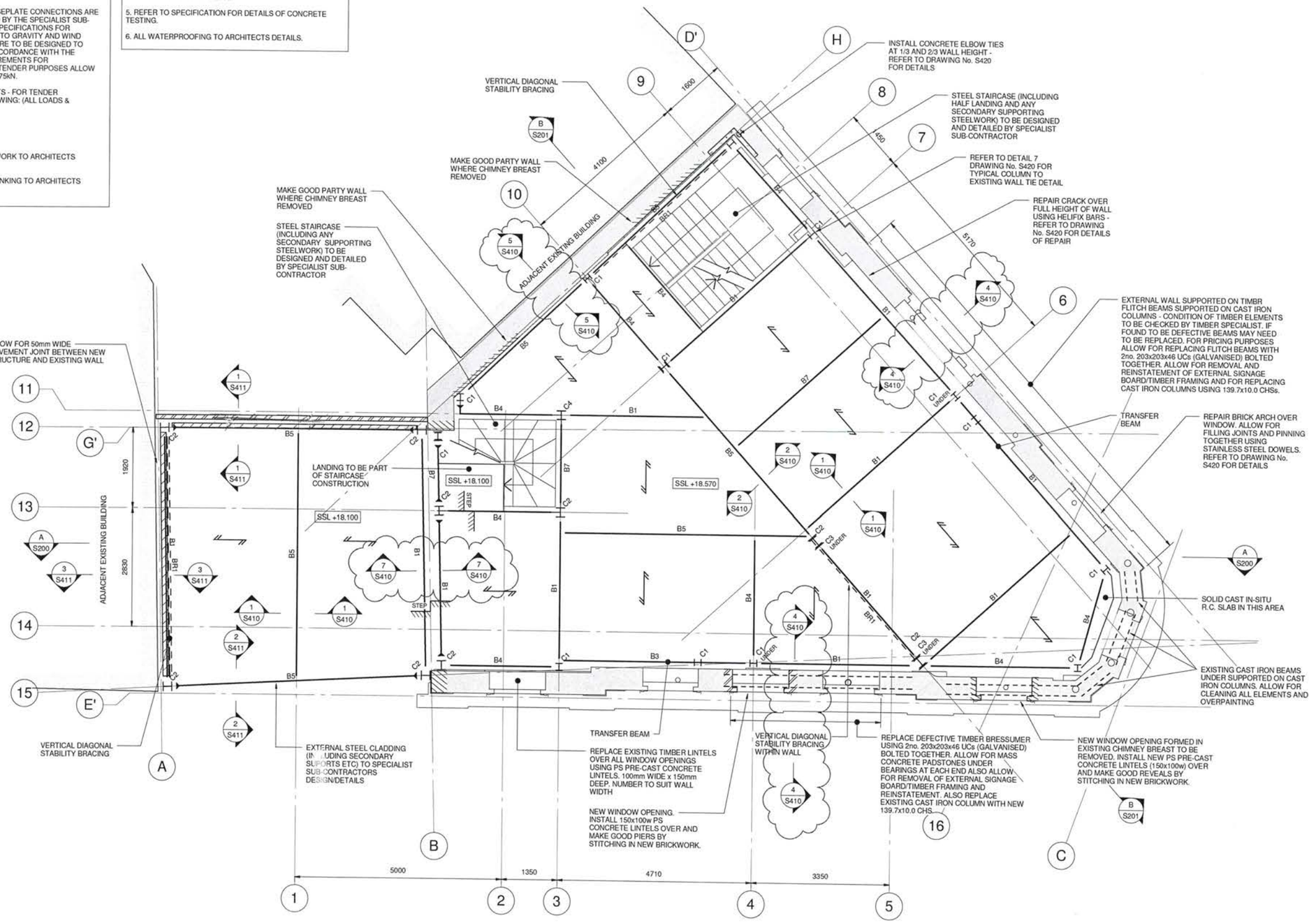

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STRUCTURAL COLUMN SCHEDULE

MARK	DESCRIPTION
C1	UC152x152x37
C2	UC203x203x60
C3	UC254x254x107
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C5	CHS139.7x10

STRUCTURAL BEAM SCHEDULE

MARK	DESCRIPTION
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B2	UC305x305x97
B3	UC254x254x89
B4	UB203x133x30
B5	UC203x203x86
B6	UB305x127x37
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B8	200x90x30 PFC
B9	RHS200x120x10.0

* - DENOTES CRANKED BEAM

NOTE:
12mm THICK PLATE TO BE WELDED TO UNDERSIDE OF ALL BEAMS SUPPORTING R.C. COMPOSITE SLABS - PLATES TO BE 200mm WIDER THAN WIDTH OF BEAM.

STRUCTURAL BRACING SCHEDULE

MARK	DESCRIPTION
BR1	10x100mm FLAT

LEGEND

- STEP — STEP IN LEVEL
- B — DENOTES STEEL BEAM
- DENOTES MOMENT CONNECTION BETWEEN STEEL MEMBERS
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- DIRECTION OF SPAN OF 200mm THICK COMPOSITE R.C. SLABS CONSTRUCTED USING RC 40 CONCRETE AND KINGSPAN MD80 V2 1.1mm THICK DECKING WITH 1 LAYER A193 MESH AND 1no. H12 BAR PER TROUGH.
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- EXISTING MASONRY STRUCTURE
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T1	22.06.15	ISSUED FOR TENDER	KDE	IP

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Drawing Status: TENDER
Project: 2 Britannia Street, London WC1X 9JE
Title: GENERAL ARRANGEMENT - FIRST FLOOR

Date JAN 2015
Scale 1 : 50
Drawn KDE
Engineer IP
Project No 140408
Drawing No S102
Revision T2

STEELWORK NOTES

1. ALL STEEL TO BE GRADE S275 EXCEPT CIRCULAR / BOX SECTION COLUMNS WHICH ARE TO BE GRADE S355.

2. REFER TO STRUCTURAL SPECIFICATION FOR DETAILS OF PAINT FINISHES TO STEELWORK.

3. ALL 'BEAM TO BEAM' AND 'BEAM TO COLUMN' CONNECTIONS ARE TO BE FORMED USING A MINIMUM OF 2No. M16 GRADE 8.8 BOLTS.

4. ALL WELDED CONNECTIONS ARE TO BE FORMED USING 6mm FILLET WELD AS A MINIMUM.

5. ALL STEEL TO STEEL AND BASEPLATE CONNECTIONS ARE TO BE DESIGNED AND DETAILED BY THE SPECIALIST SUB-CONTRACTOR. REFER TO THE SPECIFICATIONS FOR FURTHER DETAILS. IN ADDITION TO GRAVITY AND WIND LOADS etc. ALL CONNECTIONS ARE TO BE DESIGNED TO RESIST TIE FORCE LOADS IN ACCORDANCE WITH THE BUILDING REGULATIONS REQUIREMENTS FOR PROGRESSIVE COLLAPSE. FOR TENDER PURPOSES ALLOW FOR AN UNFACTORED LOAD OF 75kN.

6. CONNECTION LOADS/MOMENTS - FOR TENDER PURPOSES ASSUME THE FOLLOWING: (ALL LOADS & MOMENT ARE FACTORED).

MOMENT = 50kNm
SHEAR = 120kN
AXIAL (T/C) = 20kN

7. FIRE PROTECTION TO STEELWORK TO ARCHITECTS DETAILS.

8. ALL WATERPROOFING AND TANKING TO ARCHITECTS DETAILS.

CONCRETE NOTES

1. CONCRETE FOR ALL REINFORCED FOUNDATIONS & GROUND FLOOR SLABS TO BE GRADE RC 40 DESIGNATED MIX TO BS 8500.

2. CONCRETE FOR UNDERPINNING / MASS CONCRETE FOUNDATIONS TO BE FND 3. DESIGNATED MIX TO BS 8500.

3. CONCRETE FOR SUPER STRUCTURE WORKS TO BE GRADE RC 40 DESIGNATED MIX TO BS 8500.

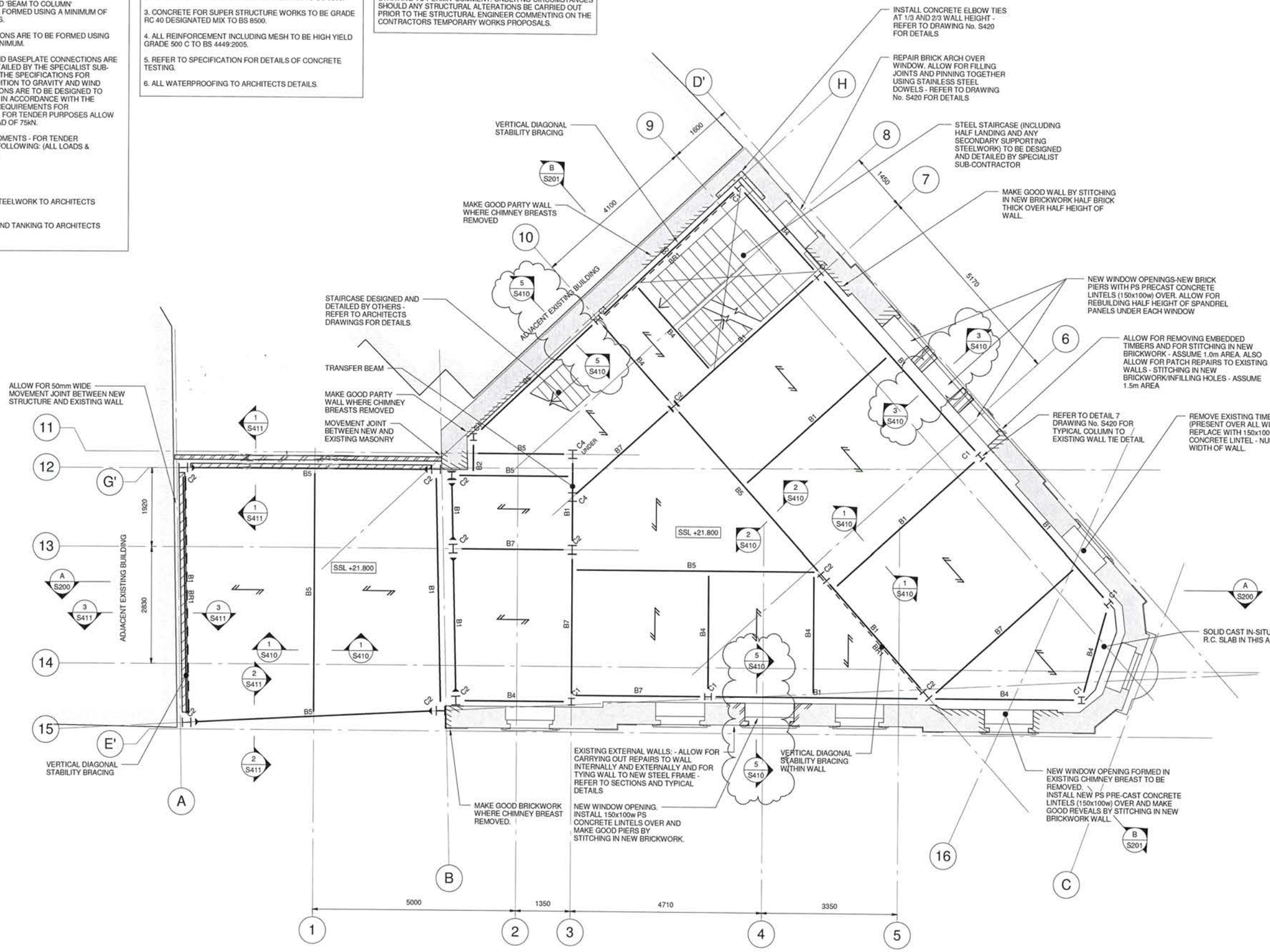
4. ALL REINFORCEMENT INCLUDING MESH TO BE HIGH YIELD GRADE 500 C TO BS 4449:2005.

5. REFER TO SPECIFICATION FOR DETAILS OF CONCRETE TESTING.

6. ALL WATERPROOFING TO ARCHITECTS DETAILS.

STRUCTURAL ALTERATION WORKS TO EXISTING TERRACES AND PUBLIC HOUSE

1. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND INSTALLATION OF ALL TEMPORARY WORKS. THEIR PROPOSALS MUST BE SUBMITTED TO THE STRUCTURAL ENGINEER SUFFICIENTLY IN ADVANCE OF THE WORKS STARTING TO PERMIT COMMENT. UNDER NO CIRCUMSTANCES SHOULD ANY STRUCTURAL ALTERATIONS BE CARRIED OUT PRIOR TO THE STRUCTURAL ENGINEER COMMENTING ON THE CONTRACTORS TEMPORARY WORKS PROPOSALS.



GENERAL NOTES

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS, ENGINEERS AND SPECIALIST DRAWINGS AND SPECIFICATIONS
2. DO NOT SCALE FROM THIS DRAWING IN EITHER PAPER OR DIGITAL FORM. USE WRITTEN DIMENSIONS ONLY.

STRUCTURAL COLUMN SCHEDULE	
MARK	DESCRIPTION
C1	UC152x152x37
C2	UC203x203x60
C3	UC254x254x107
C4	UC203x203x46
C5	CHS139.7x10

STRUCTURAL BEAM SCHEDULE	
MARK	DESCRIPTION
B1	UC203x203x60
B2	UC305x305x97
B3	UC254x254x89
B4	UB203x133x30
B5	UC203x203x86
B6	UB305x127x37
B7	UC203x203x46
B8	200x90x30 PFC
B9	RHS200x120x10.0

* - DENOTES CRANKED BEAM

NOTE:
12mm THICK PLATE TO BE WELDED TO UNDERSIDE OF ALL BEAMS SUPPORTING R.C. COMPOSITE SLABS - PLATES TO BE 200mm WIDER THAN WIDTH OF BEAM.

STRUCTURAL BRACING SCHEDULE	
MARK	DESCRIPTION
BR1	10x100mm FLAT

LEGEND

- STEP — STEP IN LEVEL
- B — DENOTES STEEL BEAM
- DENOTES MOMENT CONNECTION BETWEEN STEEL MEMBERS
- BR — DENOTES STEEL CROSS BRACING
- DIRECTION OF SPAN OF 200mm THICK COMPOSITE R.C. SLABS CONSTRUCTED USING RC 40 CONCRETE AND KINGSPAN MD80 V2 1.1mm THICK DECKING WITH 1 LAYER A193 MESH AND 1no. H12 BAR PER TROUGH.
- DIRECTION OF SPAN OF 200x50mm C16 TIMBER JOISTS @ 400mm c/c SHEATHED IN 18mm PLYWOOD
- DIRECTION OF SPAN OF 250mm THICK CAST IN-SITU R.C. SLAB
- DIRECTION OF SPAN OF 125x50mm C16 TIMBER JOISTS @ 400mm c/c
- EXISTING MASONRY STRUCTURE
- EXISTING MASONRY MADE GOOD
- NEW BRICKWORK
- NEW BLOCKWORK
- × CONNECTION POINT OF MANSARD ROOF BEAMS

NOT FOR CONSTRUCTION

Rev	Date	Description	Drawn	Check
T2	30.06.15	REVISED AS CLOUDED	KDE	IP
T1	22.06.15	ISSUED FOR TENDER	KDE	IP

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design@conisbee.co.uk
www.conisbee.co.uk

Drawing Status: TENDER
Project: 2 Britannia Street, London WC1X 9JE
Title: GENERAL ARRANGEMENT - SECOND FLOOR

Date JAN 2015
Scale 1 : 50
Drawn KDE
Engineer IP
Project No **140408**
Drawing No **S103**
Revision **T2**

STEELWORK NOTES

1. ALL STEEL TO BE GRADE S275 EXCEPT CIRCULAR / BOX SECTION COLUMNS WHICH ARE TO BE GRADE S355.

2. REFER TO STRUCTURAL SPECIFICATION FOR DETAILS OF PAINT FINISHES TO STEELWORK.

3. ALL 'BEAM TO BEAM' AND 'BEAM TO COLUMN' CONNECTIONS ARE TO BE FORMED USING A MINIMUM OF 2No. M16 GRADE 8.8 BOLTS.

4. ALL WELDED CONNECTIONS ARE TO BE FORMED USING 6mm FILLET WELD AS A MINIMUM.

5. ALL STEEL TO STEEL AND BASEPLATE CONNECTIONS ARE TO BE DESIGNED AND DETAILED BY THE SPECIALIST SUB-CONTRACTOR. REFER TO THE SPECIFICATIONS FOR FURTHER DETAILS. IN ADDITION TO GRAVITY AND WIND LOADS etc. ALL CONNECTIONS ARE TO BE DESIGNED TO RESIST TIE FORCE LOADS IN ACCORDANCE WITH THE BUILDING REGULATIONS REQUIREMENTS FOR PROGRESSIVE COLLAPSE. FOR TENDER PURPOSES ALLOW FOR AN UNFACTORED LOAD OF 75kN.

6. CONNECTION LOADS/MOMENTS - FOR TENDER PURPOSES ASSUME THE FOLLOWING: (ALL LOADS & MOMENT ARE FACTORED).

MOMENT = 50kNm
SHEAR = 120kN
AXIAL (T/C) = 20kN

7. FIRE PROTECTION TO STEELWORK TO ARCHITECTS DETAILS.

8. ALL WATERPROOFING AND TANKING TO ARCHITECTS DETAILS.

CONCRETE NOTES

1. CONCRETE FOR ALL REINFORCED FOUNDATIONS & GROUND FLOOR SLABS TO BE GRADE RC 40 DESIGNATED MIX TO BS 8500.

2. CONCRETE FOR UNDERPINNING / MASS CONCRETE FOUNDATIONS TO BE FND 3. DESIGNATED MIX TO BS 8500.

3. CONCRETE FOR SUPER STRUCTURE WORKS TO BE GRADE RC 40 DESIGNATED MIX TO BS 8500.

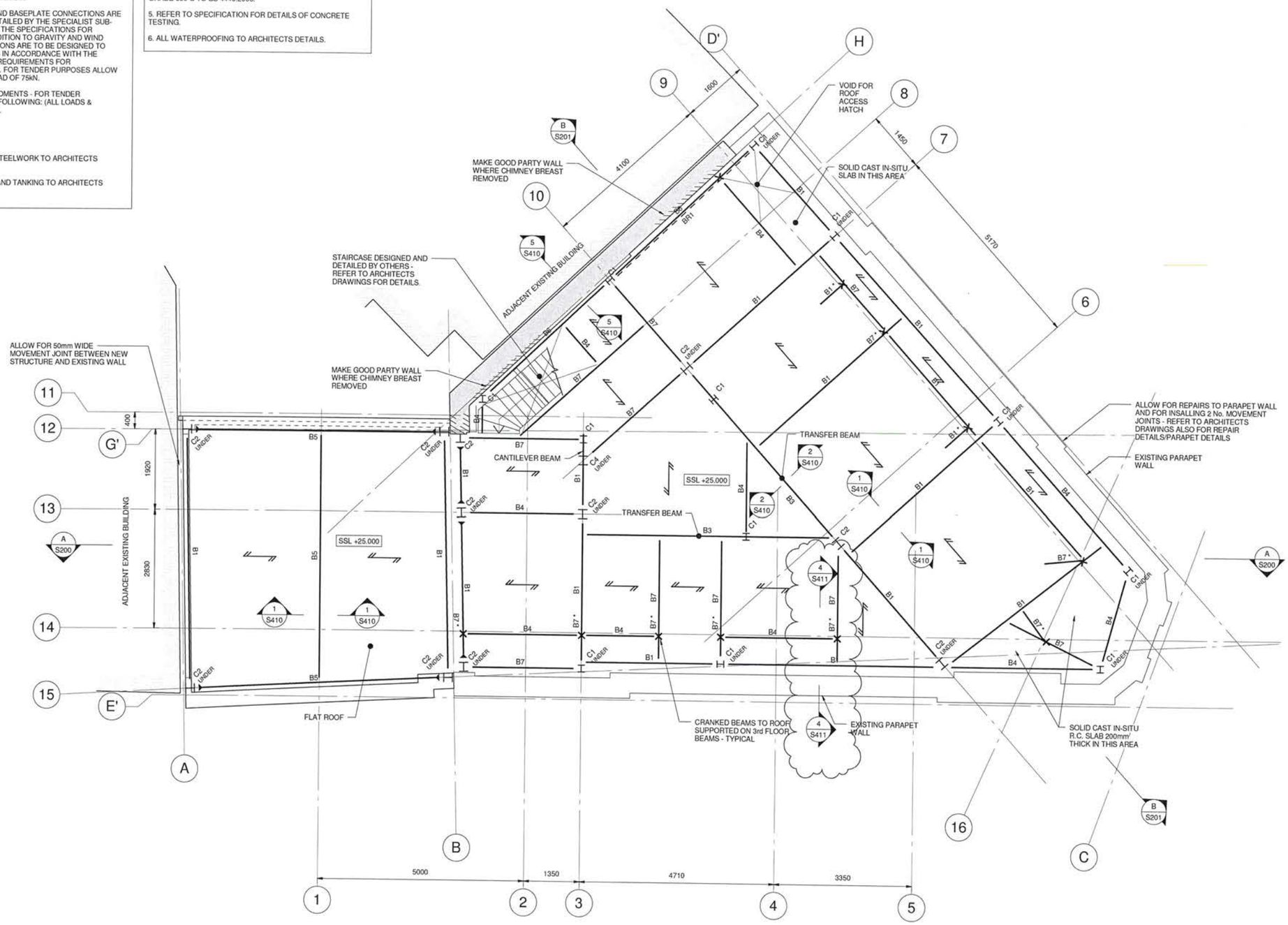
4. ALL REINFORCEMENT INCLUDING MESH TO BE HIGH YIELD GRADE 500 C TO BS 4449:2005.

5. REFER TO SPECIFICATION FOR DETAILS OF CONCRETE TESTING.

6. ALL WATERPROOFING TO ARCHITECTS DETAILS.

STRUCTURAL ALTERATION WORKS TO EXISTING TERRACES AND PUBLIC HOUSE

1. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND INSTALLATION OF ALL TEMPORARY WORKS. THEIR PROPOSALS MUST BE SUBMITTED TO THE STRUCTURAL ENGINEER SUFFICIENTLY IN ADVANCE OF THE WORKS STARTING TO PERMIT COMMENT. UNDER NO CIRCUMSTANCES SHOULD ANY STRUCTURAL ALTERATIONS BE CARRIED OUT PRIOR TO THE STRUCTURAL ENGINEER COMMENTING ON THE CONTRACTORS TEMPORARY WORKS PROPOSALS.



GENERAL NOTES

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2. DO NOT SCALE FROM THIS DRAWING IN EITHER PAPER OR DIGITAL FORM. USE WRITTEN DIMENSIONS ONLY.

STRUCTURAL COLUMN SCHEDULE	
MARK	DESCRIPTION
C1	UC152x152x37
C2	UC203x203x60
C3	UC254x254x107
C4	UC203x203x46
C5	CHS139.7x10

STRUCTURAL BEAM SCHEDULE	
MARK	DESCRIPTION
B1	UC203x203x60
B2	UC305x305x97
B3	UC254x254x89
B4	UB203x133x30
B5	UC203x203x86
B6	UB305x127x37
B7	UC203x203x46
B8	200x90x30 PFC
B9	RHS200x120x10.0

* - DENOTES CRANKED BEAM

NOTE:
12mm THICK PLATE TO BE WELDED TO UNDERSIDE OF ALL BEAMS SUPPORTING R.C. COMPOSITE SLABS - PLATES TO BE 200mm WIDER THAN WIDTH OF BEAM.

STRUCTURAL BRACING SCHEDULE	
MARK	DESCRIPTION
BR1	10x100mm FLAT

LEGEND

- STEP — STEP IN LEVEL
- B — DENOTES STEEL BEAM
- DENOTES MOMENT CONNECTION BETWEEN STEEL MEMBERS
- BR — DENOTES STEEL CROSS BRACING
- DIRECTION OF SPAN OF 200mm THICK COMPOSITE R.C. SLABS CONSTRUCTED USING RC 40 CONCRETE AND KINGSPAN MD80 V2 1.1mm THICK DECKING WITH 1 LAYER A193 MESH AND 1no. H12 BAR PER TROUGH.
- DIRECTION OF SPAN OF 200x50mm C16 TIMBER JOISTS @ 400mm c/c SHEATHED IN 18mm PLYWOOD
- DIRECTION OF SPAN OF 250mm THICK CAST IN-SITU R.C. SLAB
- DIRECTION OF SPAN OF 125x50mm C16 TIMBER JOISTS @ 400mm c/c
- EXISTING MASONRY STRUCTURE
- EXISTING MASONRY MADE GOOD
- NEW BRICKWORK
- NEW BLOCKWORK
- × CONNECTION POINT OF MANSARD ROOF BEAMS

NOT FOR CONSTRUCTION

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T2	30.06.15	REVISED AS CLOUDED	KDE	IP
T1	22.06.15	ISSUED FOR TENDER	KDE	IP

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Drawing Status: TENDER
Project: 2 Britannia Street, London WC1X 9JE
Title: GENERAL ARRANGEMENT - THIRD FLOOR

Date JAN 2015
Scale 1 : 50
Drawn KDE
Engineer IP
Project No 140408
Drawing No S104
Revision T2

STEELWORK NOTES

1. ALL STEEL TO BE GRADE S275 EXCEPT CIRCULAR / BOX SECTION COLUMNS WHICH ARE TO BE GRADE S355.

2. REFER TO STRUCTURAL SPECIFICATION FOR DETAILS OF PAINT FINISHES TO STEELWORK.

3. ALL 'BEAM TO BEAM' AND 'BEAM TO COLUMN' CONNECTIONS ARE TO BE FORMED USING A MINIMUM OF 2No. M16 GRADE 8.8 BOLTS.

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AXIAL (T/C) = 20kN

7. FIRE PROTECTION TO STEELWORK TO ARCHITECTS DETAILS.

8. ALL WATERPROOFING AND TANKING TO ARCHITECTS DETAILS.

CONCRETE NOTES

1. CONCRETE FOR ALL REINFORCED FOUNDATIONS & GROUND FLOOR SLABS TO BE GRADE RC 40 DESIGNATED MIX TO BS 8500.

2. CONCRETE FOR UNDERPINNING / MASS CONCRETE FOUNDATIONS TO BE FND 3. DESIGNATED MIX TO BS 8500.

3. CONCRETE FOR SUPER STRUCTURE WORKS TO BE GRADE RC 40 DESIGNATED MIX TO BS 8500.

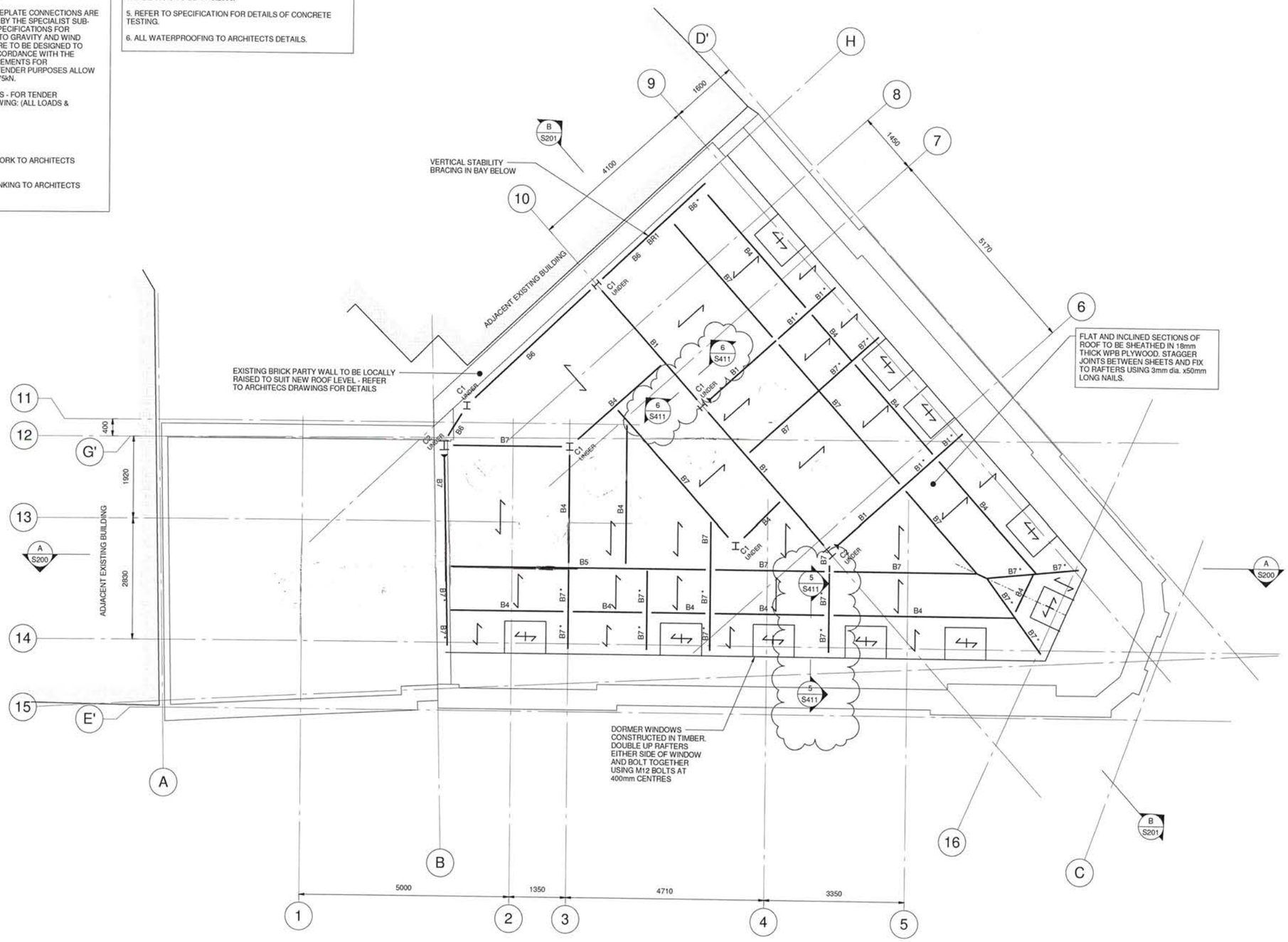
4. ALL REINFORCEMENT INCLUDING MESH TO BE HIGH YIELD GRADE 500 C TO BS 4449:2005.

5. REFER TO SPECIFICATION FOR DETAILS OF CONCRETE TESTING.

6. ALL WATERPROOFING TO ARCHITECTS DETAILS.

STRUCTURAL ALTERATION WORKS TO EXISTING TERRACES AND PUBLIC HOUSE

1. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND INSTALLATION OF ALL TEMPORARY WORKS. THEIR PROPOSALS MUST BE SUBMITTED TO THE STRUCTURAL ENGINEER SUFFICIENTLY IN ADVANCE OF THE WORKS STARTING TO PERMIT COMMENT. UNDER NO CIRCUMSTANCES SHOULD ANY STRUCTURAL ALTERATIONS BE CARRIED OUT PRIOR TO THE STRUCTURAL ENGINEER COMMENTING ON THE CONTRACTORS TEMPORARY WORKS PROPOSALS.



GENERAL NOTES

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STRUCTURAL COLUMN SCHEDULE

MARK	DESCRIPTION
C1	UC152x152x37
C2	UC203x203x60
C3	UC254x254x107
C4	UC203x203x46
C5	CHS139.7x10

STRUCTURAL BEAM SCHEDULE

MARK	DESCRIPTION
B1	UC203x203x60
B2	UC305x305x97
B3	UC254x254x89
B4	UB203x133x30
B5	UC203x203x86
B6	UB305x127x37
B7	UC203x203x46
B8	200x90x30 PFC
B9	RHS200x120x10.0

* - DENOTES CRANKED BEAM

NOTE:
12mm THICK PLATE TO BE WELDED TO UNDERSIDE OF ALL BEAMS SUPPORTING R.C. COMPOSITE SLABS - PLATES TO BE 200mm WIDER THAN WIDTH OF BEAM.

STRUCTURAL BRACING SCHEDULE

MARK	DESCRIPTION
BR1	10x100mm FLAT

LEGEND

- STEP — STEP IN LEVEL
- B — DENOTES STEEL BEAM
- DENOTES MOMENT CONNECTION BETWEEN STEEL MEMBERS
- BR — DENOTES STEEL CROSS BRACING
- DIRECTION OF SPAN OF 200mm THICK COMPOSITE R.C. SLABS CONSTRUCTED USING RC 40 CONCRETE AND KINGSPAN MD60 V2 1.1mm THICK DECKING WITH 1 LAYER A193 MESH AND 1no. H12 BAR PER TROUGH.
- DIRECTION OF SPAN OF 200x50mm C16 TIMBER JOISTS @ 400mm c/c SHEATHED IN 18mm PLYWOOD
- DIRECTION OF SPAN OF 250mm THICK CAST IN-SITU R.C. SLAB
- DIRECTION OF SPAN OF 125x50mm C16 TIMBER JOISTS @ 400mm c/c
- EXISTING MASONRY STRUCTURE
- EXISTING MASONRY MADE GOOD
- NEW BRICKWORK
- NEW BLOCKWORK
- × CONNECTION POINT OF MANSARD ROOF BEAMS

NOT FOR CONSTRUCTION

Rev	Date	Description	Drawn	Check
T2	30.06.15	REVISED AS CLOUDED	KDE	IP
T1	22.06.15	ISSUED FOR TENDER	KDE	IP

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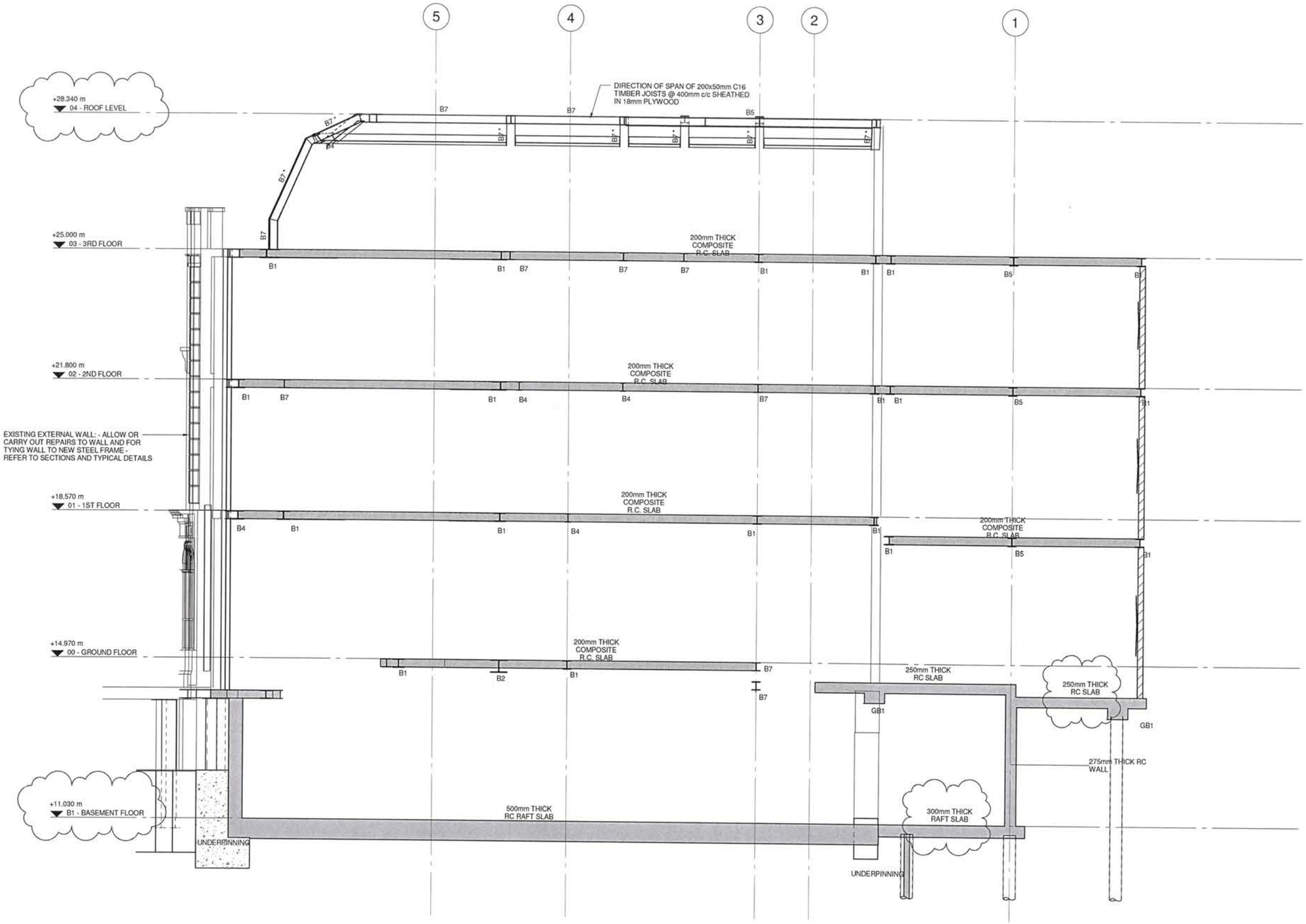
www.conisbee.co.uk

Drawing Status: TENDER

Project: 2 Britannia Street, London WC1X 9JE

Title: GENERAL ARRANGEMENT - ROOF LEVEL

Date JAN 2015
Scale 1 : 50
Drawn KDE
Engineer IP
Project No 140408
Drawing No S105
Revision T2



A Section A
1 : 50

GENERAL NOTES

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STRUCTURAL COLUMN SCHEDULE	
MARK	DESCRIPTION
C1	UC152x152x37
C2	UC203x203x60
C3	UC254x254x107
C4	UC203x203x46
C5	CHS139.7x10

STRUCTURAL BEAM SCHEDULE	
MARK	DESCRIPTION
B1	UC203x203x60
B2	UC305x305x97
B3	UC254x254x89
B4	UB203x133x30
B5	UC203x203x86
B6	UB305x127x37
B7	UC203x203x46
B8	200x90x30 PFC
B9	RHS200x120x10.0

* - DENOTES CRANKED BEAM

NOTE:
12mm THICK PLATE TO BE WELDED TO UNDERSIDE OF ALL BEAMS SUPPORTING R.C. COMPOSITE SLABS - PLATES TO BE 200mm WIDER THAN WIDTH OF BEAM.

STRUCTURAL BRACING SCHEDULE	
MARK	DESCRIPTION
BR1	10x100mm FLAT

LEGEND

- STEP — STEP IN LEVEL
- B — DENOTES STEEL BEAM
- DENOTES MOMENT CONNECTION BETWEEN STEEL MEMBERS
- BR — DENOTES STEEL CROSS BRACING
- DIRECTION OF SPAN OF 200mm THICK COMPOSITE R.C. SLABS CONSTRUCTED USING RC 40 CONCRETE AND KINGSPAN MD90 V2 1.1mm THICK DECKING WITH 1 LAYER A193 MESH AND 1no. H12 BAR PER TROUGH.
- DIRECTION OF SPAN OF 200x50mm C16 TIMBER JOISTS @ 400mm c/c SHEATHED IN 18mm PLYWOOD
- DIRECTION OF SPAN OF 250mm THICK CAST IN-SITU R.C. SLAB
- DIRECTION OF SPAN OF 125x50mm C16 TIMBER JOISTS @ 400mm c/c
- EXISTING MASONRY STRUCTURE
- EXISTING MASONRY MADE GOOD
- NEW BRICKWORK
- NEW BLOCKWORK
- × CONNECTION POINT OF MANSARD ROOF BEAMS

NOT FOR CONSTRUCTION

Rev	Date	Description	Drawn	Check
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T1	22.06.15	ISSUED FOR TENDER	KDE	IP

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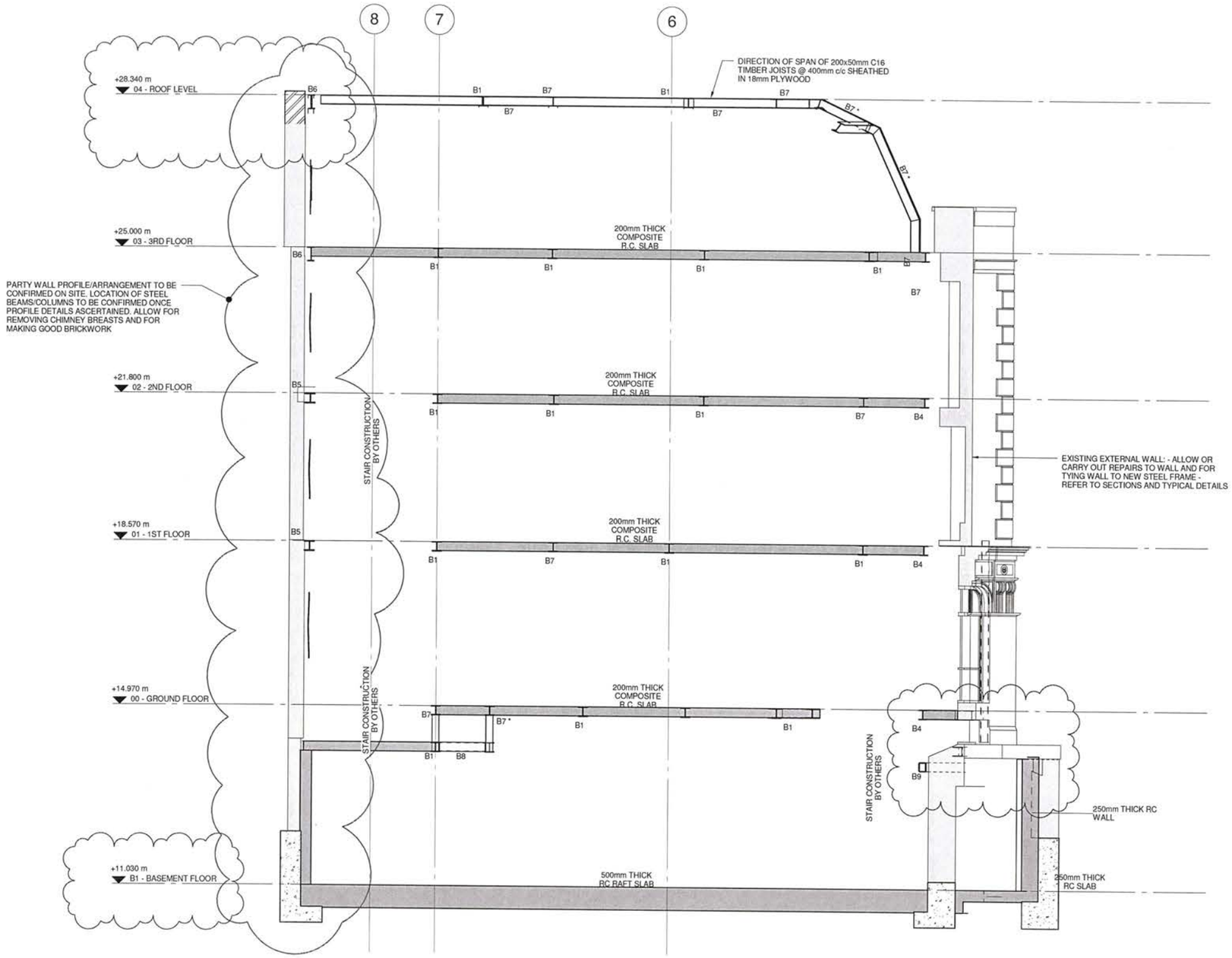
Drawing Status: TENDER
Project: 2 Britannia Street, London WC1X 9JE
Title: SECTION - SHEET 1

Date JAN 2015
Scale 1 : 50
Drawn KDE
Engineer IP
Project No 140408
Drawing No S200
Revision T2



B Section B
1 : 50

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STRUCTURAL COLUMN SCHEDULE	
MARK	DESCRIPTION
C1	UC152x152x37
C2	UC203x203x60
C3	UC254x254x107
C4	UC203x203x46
C5	CHS139.7x10

STRUCTURAL BEAM SCHEDULE	
MARK	DESCRIPTION
B1	UC203x203x60
B2	UC305x305x97
B3	UC254x254x89
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B5	UC203x203x86
B6	UB305x127x37
B7	UC203x203x46
B8	200x90x30 PFC
B9	RHS200x120x10.0

* - DENOTES CRANKED BEAM

NOTE:
12mm THICK PLATE TO BE WELDED TO UNDERSIDE OF ALL BEAMS SUPPORTING R.C. COMPOSITE SLABS - PLATES TO BE 200mm WIDER THAN WIDTH OF BEAM.

STRUCTURAL BRACING SCHEDULE	
MARK	DESCRIPTION
BR1	10x100mm FLAT

LEGEND

- STEP — STEP IN LEVEL
- B — DENOTES STEEL BEAM
- DENOTES MOMENT CONNECTION BETWEEN STEEL MEMBERS
- BR — DENOTES STEEL CROSS BRACING
- DIRECTION OF SPAN OF 200mm THICK COMPOSITE R.C. SLABS CONSTRUCTED USING RC 40 CONCRETE AND KINGSPAN MD80 V2 1.1mm THICK DECKING WITH 1 LAYER A193 MESH AND 1no. H12 BAR PER TROUGH.
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- DIRECTION OF SPAN OF 250mm THICK CAST IN-SITU R.C. SLAB
- DIRECTION OF SPAN OF 125x50mm C16 TIMBER JOISTS @ 400mm c/c
- EXISTING MASONRY STRUCTURE
- EXISTING MASONRY MADE GOOD
- NEW BRICKWORK
- NEW BLOCKWORK
- × CONNECTION POINT OF MANSARD ROOF BEAMS

NOT FOR CONSTRUCTION

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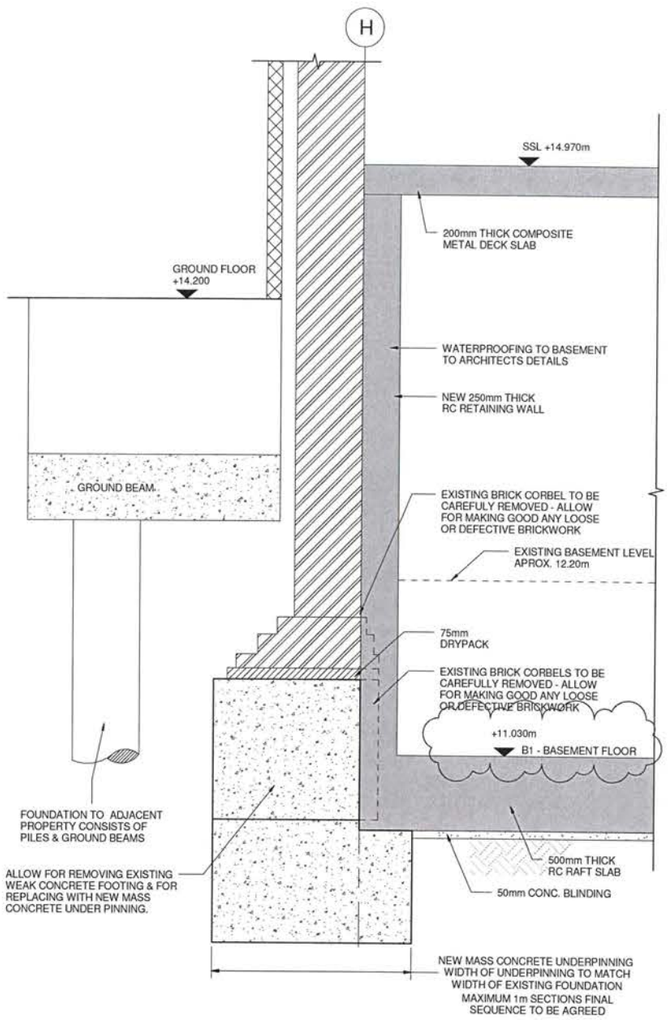
Drawing Status: TENDER
Project: 2 Britannia Street, London WC1X 9JE
Title: SECTION - SHEET 2
Date: JAN 2015
Scale: 1 : 50
Drawn: KDE
Engineer: IP
Project No: 140408
Drawing No: S201
Revision: T2



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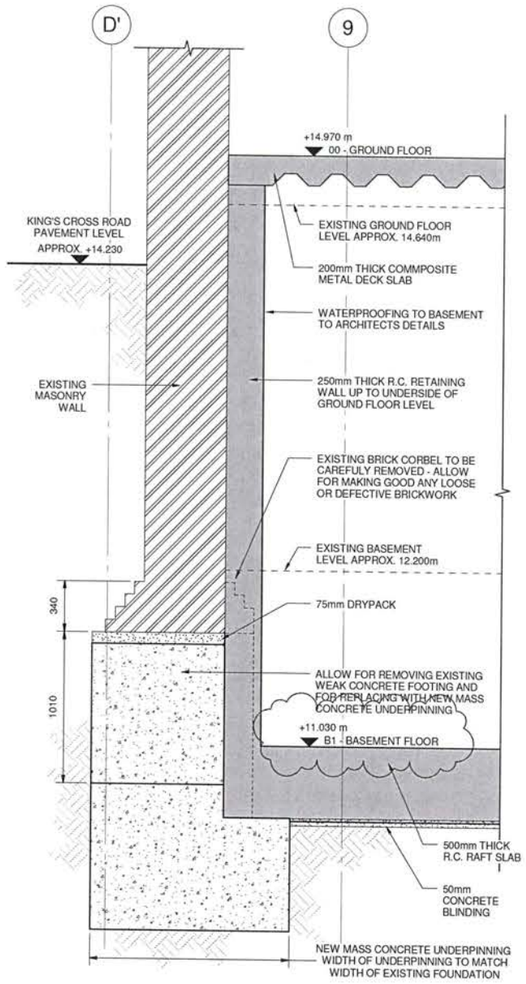
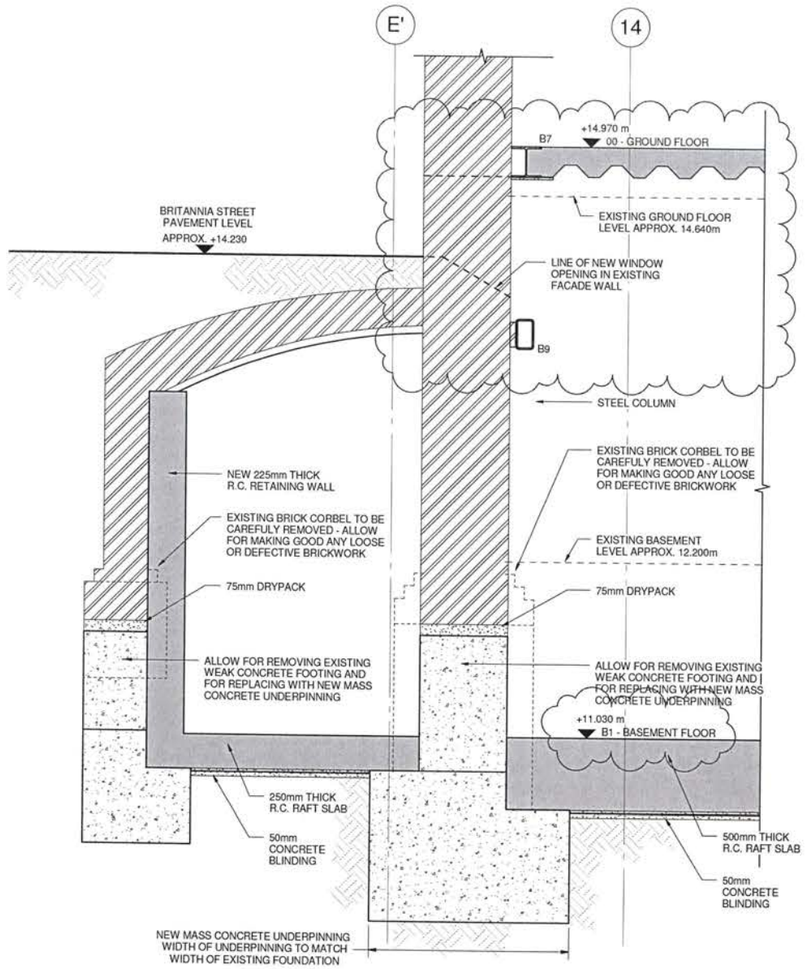
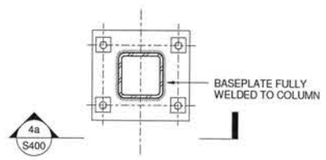


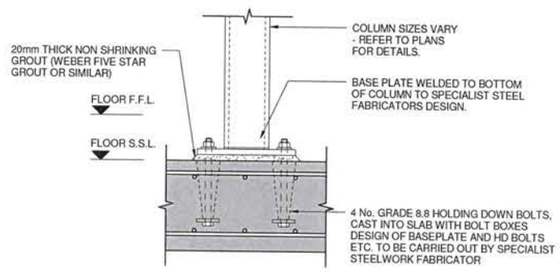
2 BASEMENT DETAIL 2
1 : 20



3 BASEMENT DETAIL 3
1 : 20



4 Baseplate - Cast-in Bolts - Plan
1 : 10



4a Baseplate - Cast-in Bolts - Section
1 : 10

GENERAL NOTES

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T2	30.06.15	REVISED AS CLOUDED	KDE	IP
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Consulting Structural Engineers
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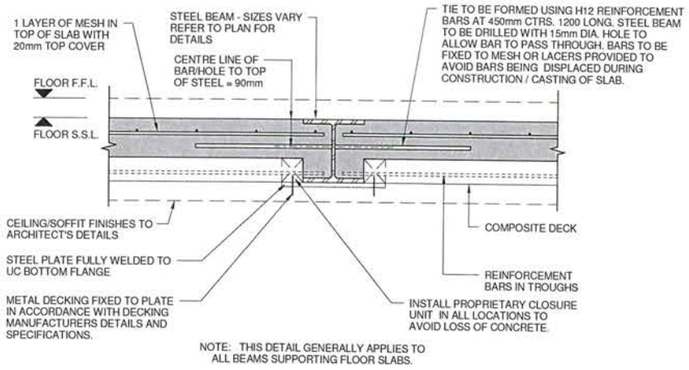
Drawing Status: TENDER

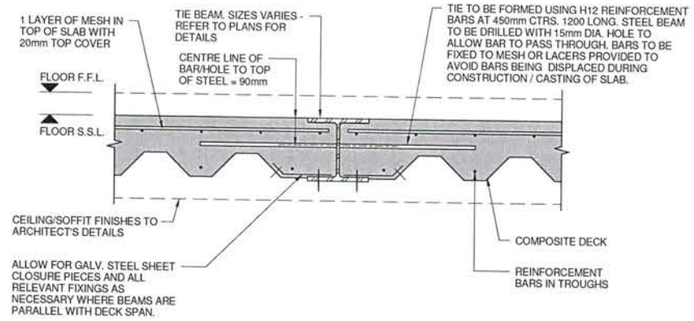
Project: 2 Britannia Street, London WC1X 9JE

Title: BASEMENT AND GROUND FLOOR DETAILS

Date JAN 2015
Scale As indicated
Drawn KDE
Engineer IP
Project No 140408
Drawing No S400
Revision T2



1 Typical Composite Floor - Detail 1
1 : 10



2 Typical Composite Floor - Detail 2
1 : 10

GENERAL NOTES

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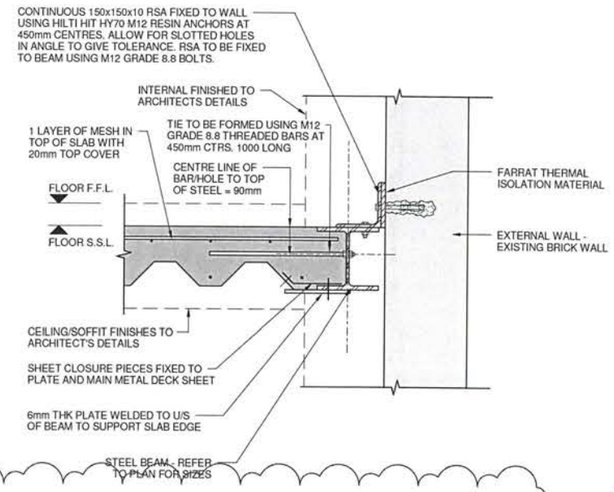
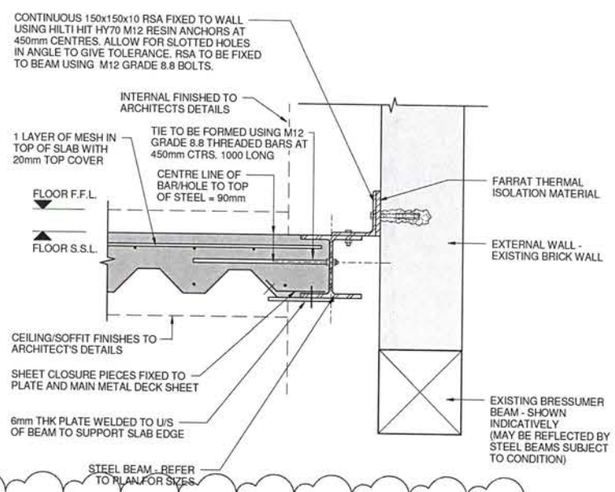
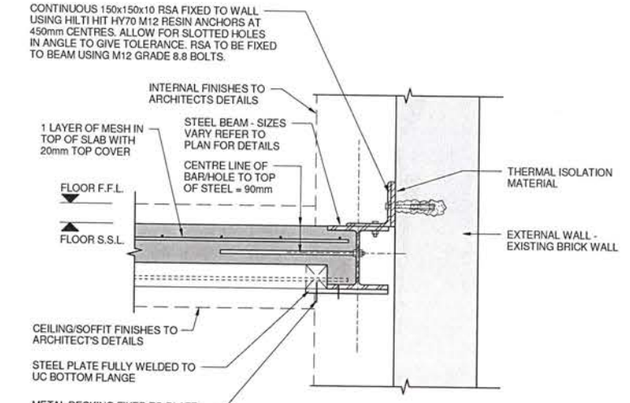


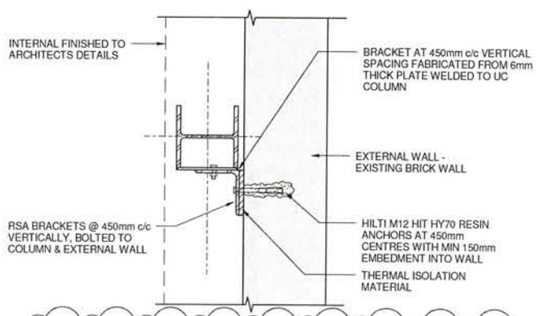
3 Typical Edge Detail Adjacent to Masonry Wall - Type 1
1 : 10



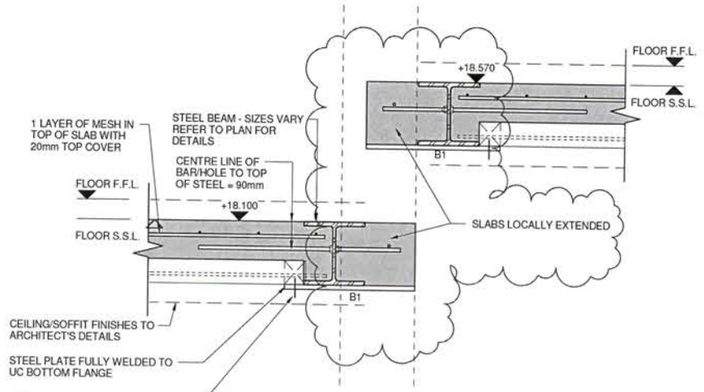
4 Typical Edge Detail Adjacent to Masonry Wall - Type 2
1 : 10



5 Typical Edge Detail Adjacent to Masonry Wall - Type 3
1 : 10



6 Typical External Wall to Column Restraint
1 : 10



7 Level 1 - Step in Level
1 : 10

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NOT FOR CONSTRUCTION

Rev	Date	Description	Drawn	Check
T2	30.06.15	REVISED AS CLOUDED	KDE	IP
T1	22.06.15	ISSUED FOR TENDER	KDE	IP

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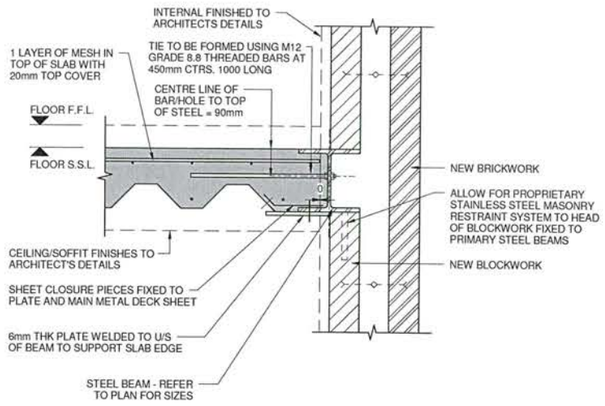
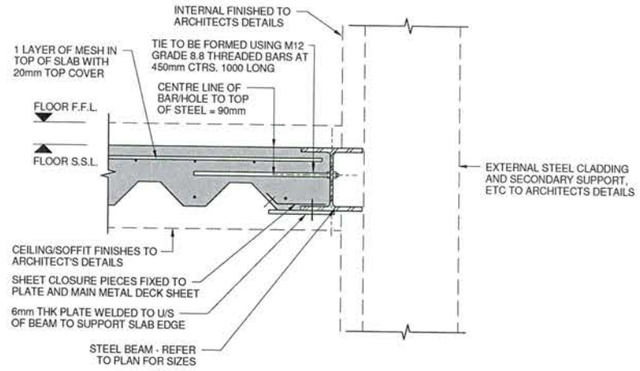
Drawing Status: TENDER
Project: 2 Britannia Street, London WC1X 9JE
Title: SUPERSTRUCTURE DETAILS - SHEET 1

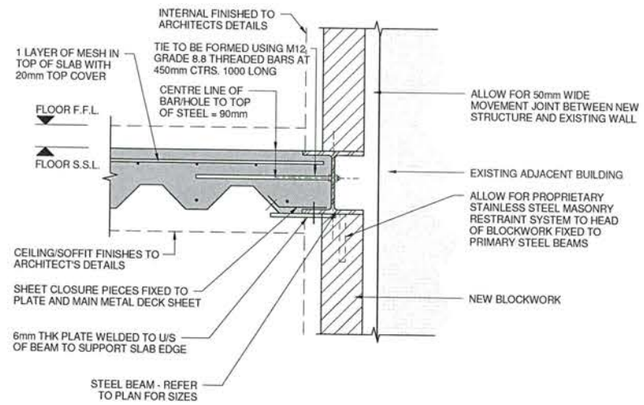
Date JAN 2015
Scale 1 : 10
Drawn KDE
Engineer IP
Project No 140408
Drawing No S410
Revision T2



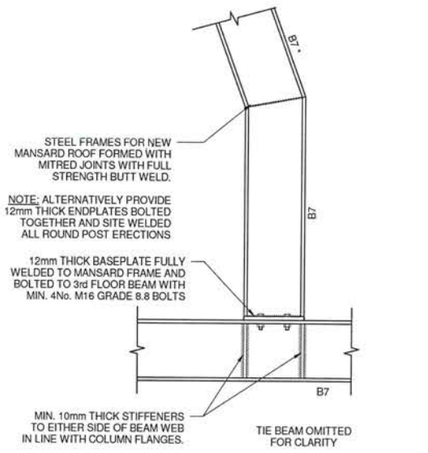
1 Typical Edge Detail with New Masonry Facade 1
1 : 10



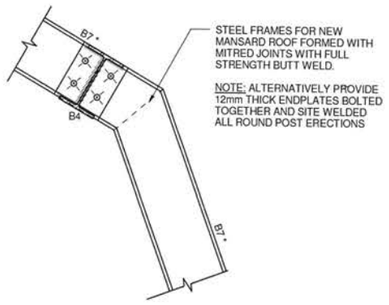
2 Typical Edge Detail with New Masonry Facade 2
1 : 10



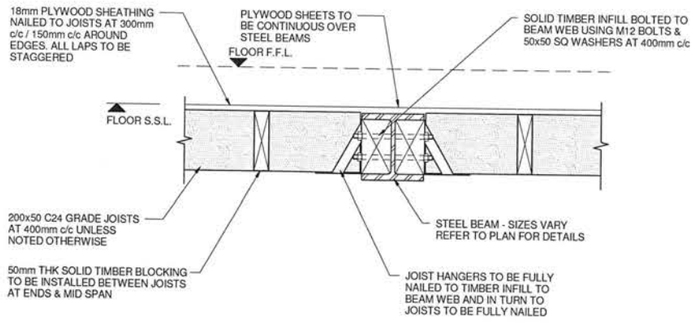
3 Typical Edge Detail - Existing Building with New Masonry Facade
1 : 10



4 Mansard Roof Base Connection
1 : 10



5 Mansard Roof Tie Beam Connection
1 : 10



6 Typical Section through Flat Roof Area
1 : 10

NOT FOR CONSTRUCTION

Rev	Date	Description	Drawn	Check
T1	30.06.15	ISSUED FOR TENDER	KDE	IP

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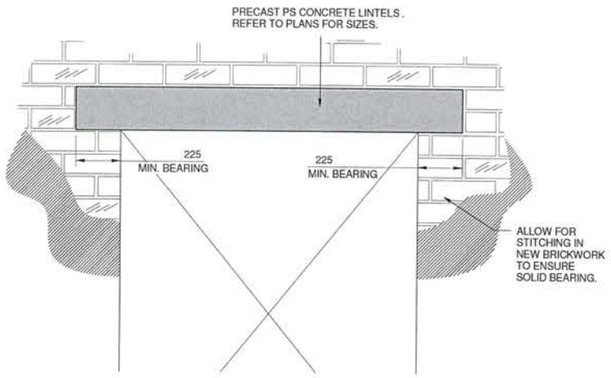
Drawing Status: TENDER

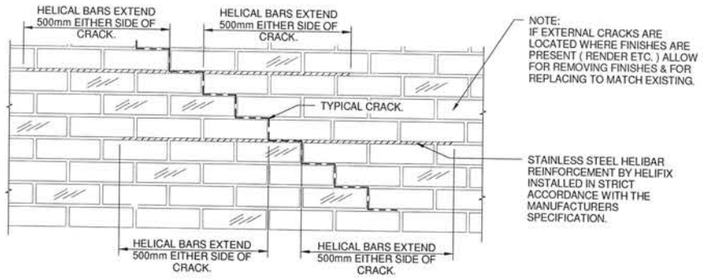
Project: 2 Britannia Street, London WC1X 9JE

Title: SUPERSTRUCTURE DETAILS - SHEET 2

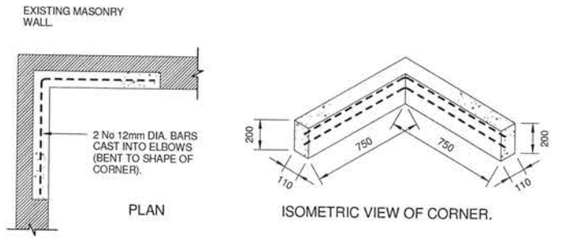
Date JAN 2015
Scale 1 : 10
Drawn KDE
Engineer IP
Project No **140408**
Drawing No **S411**
Revision **T1**



1 New Lintel Replacement Detail
1 : 10



2 Crack Repair Detail - Part Elevation
1 : 10



THE LENGTH OF THE LEGS MAY NEED TO BE INCREASED TO PROVIDE 450 mm ANCHORAGE BEYOND SEVERE FRACTURES REMOTE FROM THE CORNERS.

SEQUENCE OF OPERATIONS

1. CORNER POCKET, 3 COURSES DEEP, CUT 110 mm IN TO ADJOINING WALLS. MINIMUM LENGTH 750 mm IN EACH WALL.
2. POCKET CLEANED OF ALL LOOSE MORTAR AND DUST AND THOROUGHLY WETTED IMMEDIATELY BEFORE CONCRETING.
3. POCKET FILLED TO DEPTH OF 200 mm (WITH 1:1:2 CEMENT:SHARP SAND:10 mm PEA SHINGLE AND WATER, SO CONCRETE HAS CONSISTENCY OF PORRIDGE) AND WELL CONSOLIDATED AROUND 2 No 12 DIA. STEEL BARS IN POSITION.
4. AFTER CONCRETE HAS HARDENED, REMOVE SHUTTERS AND GENTLY DRY PACK (1:2 CEMENT:SHARP SAND, MOIST) TO FILL REMAINING GAP ABOVE CONCRETE ELBOW.

3 Reinforced Concrete Corner Elbow Details
1 : 20

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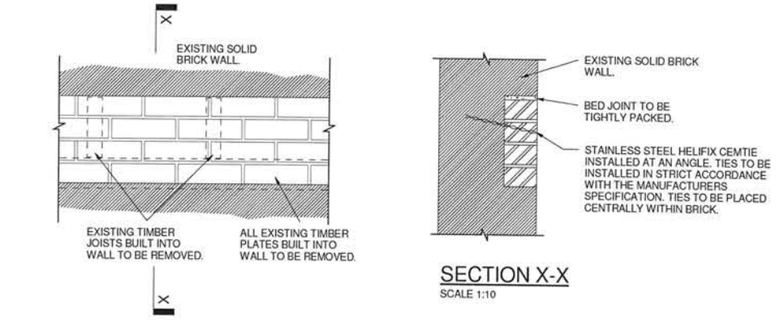
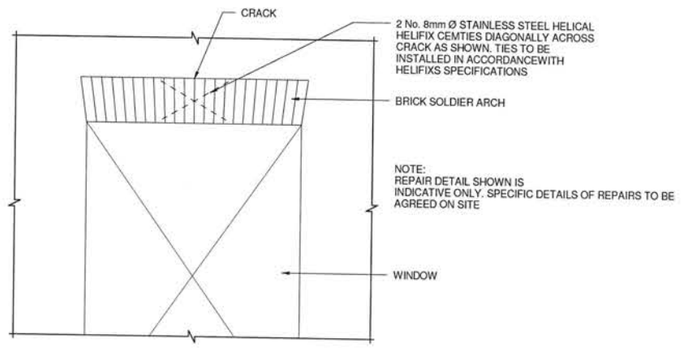


4 Removal of Built in Timbers-Brickwork Repair Detail
1 : 10



5 Repair of Cracked Soldier Arch
1 : 20

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Drawing Status: TENDER

Project: 2 Britannia Street, London WC1X 9JE

Title: REMEDIAL WORKS DETAILS

Date JAN 2015
Scale As indicated
Drawn KDE
Engineer IP
Project No 140408
Drawing No S420
Revision T2