STRUCTURAL DRAWINGS

EXAMPLE PROJECT 3

SANDSTONE
ENGINEERING

DOCUMENT REGISTER.			REVISION.								
DOCUMENT TITLE.	DRAWING REF.	SCALE.	16.10.24								
FOUNDATION PLAN	90	1:100 @ A3	P.01								
GROUND FLOOR PLAN	100	1:100 @ A3	P.01								
FIRST FLOOR PLAN	110	1:100 @ A3	P.01								
SECOND FLOOR PLAN	120	1:100 @ A3	P.01								
ROOF PLAN	130	1:100 @ A3	P.01								
STRUCTURAL DETAILS 1	200	1:20 @ A3	P.01								
STRUCTURAL DETAILS 2	210	1:20 @ A3	P.01								
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STRUCTURAL SECTIONS	300	1:100 @ A3	-								
STRUCTURAL SPECIFICATION	-	A4	A								

PRELIMINARY ISSUE (NOT FOR CONSTRUCTION)
PROJECT NO. 315
EXAMPLE PROJECT 3

GENERAL

Sandstone Engineering drawings are to be read in conjunction with all relevant Architect's, Engineer's and Specialists' drawings and specifications.

Do not scale from any Sandstone Engineering drawings. Dimensions in millimeters, levels in meters.

DPC, DPM and all waterproofing to Architect's details. Any damp proof membranes shown on Sandstone Engineering drawings are indicative, shown to clarify position within construction ONLY.

Refer to Architect's details for extent of demolition, steelwork fire protection, floor separation and acoustic isolation.

The Structural Engineer requires either an electronic copy or two paper copies of all drawings and calculations for temporary work, steel fabrication and sub-contractor design elements. To be issued ten working days after receipt of drawings for preparation of comments by Structural Engineer.

TEMPORARY WORKS

All temporary works designs should comply with requirements of BS 5975. When returning the tender, confirm details of the persons responsible for all temporary works ('Temporary Works Co-ordinator')

All necessary temporary works fall on the responsibility of the Contractor, including design, installation and maintenance and must insure the stability and robustness of the building throughout the course of work. The Contractor is to produce Method Statements to outline the proposed sequence of works and details of temporary works which are to be issued for comment by the Structural Engineer prior to commencement of works on-site.

Installing beam in 3m opening in existing structure: Allow for folding wedges, Harjaks or other means to pre-deflect until mid-span deflection span/400 prior to load transfer from temporary works to beam.

CONCRETE

Unless Notes Otherwise:
- Blinding = GEN 1
- Strip footings and trench fill = GEN 3, if in clays use FND2
- Mass Concrete = GEN 3, if in clays use FND2
- Reinforced Concrete - above ground = RC28/35
- Foundation Concrete - reinforced = FND2

Concrete finishes to BS EN 13670 Table F.4:

- All formed surfaces are to be ordinary finish
- Tops of ground beams and floor slabs are to be uniformly leveled and tamped for a basic unformed finish.

FOUNDATIONS

Foundation sizes and depths are based on an allowable safe ground bearing pressure of 100 kN/m². All foundation details are subject to approval by the Building Inspector.

The Structural Engineer and Building Inspector shall be given the opportunity of examining all excavations, filling and hardcore before they are concreted or covered up.

MASONRY

Minimum characteristic strength of masonry:
- 20N/mm² for all load bearing brickwork.
- 7N/mm² for all load bearing blockwork.

All lintels to have minimum 150mm bearing at supports either side.

Sulfate-resisting cement is to be used below DPC level.

Pockets in party walls for padstones/lintels etc. are to be formed by carefully removing stretchers and snapping off headers where required.

Refer to the Architect's drawings and specification for: setting out of masonry, coursing and boding requirements, jointing details and mortar types unless noted otherwise on Sandstone Engineering's drawings

For vertical movement joints in brickwork, refer to Architect's details. Allow for movement joints in blockwork (at 6m centres) and in brickwork (at 10-12m centres)

Where chimney breasts are to be demolished and retained:
Chimney stack re-supported by proposed steelwork on drawings and details, existing masonry to be cleanly disk-cut back.

Contractor to undertake a flue survey to confirm flues do not cross the party wall. Contractor to allow for the chimney breast and flues to be made-good and infilled with new masonry tied to the existing masonry with wall starters and retrofit wall ties

STEEL

All steel sections and plate are to be grade S355. Hollow sections are to be grade S355. Unless noted otherwise

The Contractor is to produce dimensioned fabrication drawings. Not within Sandstone Engineering's scope.

The Contractor is responsible for the final design and detailing of the steelwork connections. Refer to Section G10 of the Structural Specification. Contact Sandstone Engineering for Connection Forces.

All bolted connections to use grade 8.8 bolts with a minimum of four M12 bolts per member unless specifically indicated otherwise on details or drawing notes.

All welds are to be minimum 6mm leg length continuous fillet welds unless specifically noted otherwise on details or drawing notes.

All internal steelwork is to be blast cleaned to Sa 2.5 and painted with zinc phosphate primer - Sherwin-Williams' Macropoxy 400 or equal approved.

- For steelwork in dry internal spaces: 75 microns dry film thickness (dft)
- For steelwork in cavities: 250 microns (dft)

External steelwork is to have corrosion protection, galvanised or encased in concrete (wrapped in 2no layers of D49 mesh with 75mm encasement) -- Refer to Architect's drawings for confirmation

Where supporting masonry, if corbel exceeds 25mm, Contractor to provision for a 10mm thick steel plate welded to the top flange with a 6mm hit and miss fillet weld to support full width of masonry.

All steel plates supporting external masonry to stop short 20mm from external facade.

TIMBER

All timber members to be grade C24 unless noted otherwise. All timbers except upper floor joists are to be pressure-impregnated with preservative. Cut ends to be brush treated.

Joists denoted as DJ/TJ/QJ are to be multiple members bolted together using M12 black bolts at 400mm centres.

All bolts into timber are to have 50 square x 3 thick steel washers below nut.

Solid blocking or herringbone strutting to be provided between all timber joists or rafters as follows:
- 2.5m to 4.5m span: mid-span and at each end support
- Greater than 4.5m: two rows equally spaced within span and at end supports.

Outer joists or rafters to be blocked solidly to perimeter walls.

Wall plates for roofs to be tied down to MASONRY using 1200mm long 30 x 2.5mm galvanized steel straps at 1200mm centres with a 100 bob end. Straps to be nailed to the top plate, plugged and screwed to the internal face of the wall.

Wall plates for roofs to be tied down to TIMBER using Simpson Strong-Tie Twist Stud Plate (TSP) between every other stud, or 1200mm long, 30x2.5mm galvanised steel straps. To be nailed to the top plate and studs.

Lateral restraint straps for floors to be minimum 1200mm long, 30 x 5mm galvanized steel straps at 1200mm centres with 150 bob end. Straps perpendicular to joists to be nailed to tops of three joists + solid blocking infill using 5, 75mm long, 3.8Ø nails. Straps parallel to joists are to be let-in to the top of the joists and nailed in place using 6, 50mm long, 3.4Ø nails. Refer to typical details.

All new timber partitions are to be built off doubled-up joists or solid timber blocking between new/existing floor joists.

Unless specified otherwise on the Engineer's drawings, structural timber members may only be drilled or cut for services as follows:

Single notches - either top or bottom; maximum 0.125 x joist depth and 2 x joist width, located 0.125 - 0.25 x span from supports.

Holes: maximum diameter 0.25 x joist depth, located 0.25-0.4 x span from supports. Hole spacing: minimum of 3 hole diameters.

Unless noted otherwise, Contractor to allow provisional sum to strengthen floor plate beneath heavy finishes including: doubling-up joists, replacing defective timbers, installing noggins and an 18mm thick plywood skin glued and screwed to top of joists via No. 8 wood screws with maximum 150mm spacing.

Unless noted otherwise, Contractor to allow provisional sum to level the floor plate beneath brittle finishes including installing an 18mm thick plywood skin glued and screwed to top of joists with fixings at a maximum 150mm centres with No. 8 wood screws.

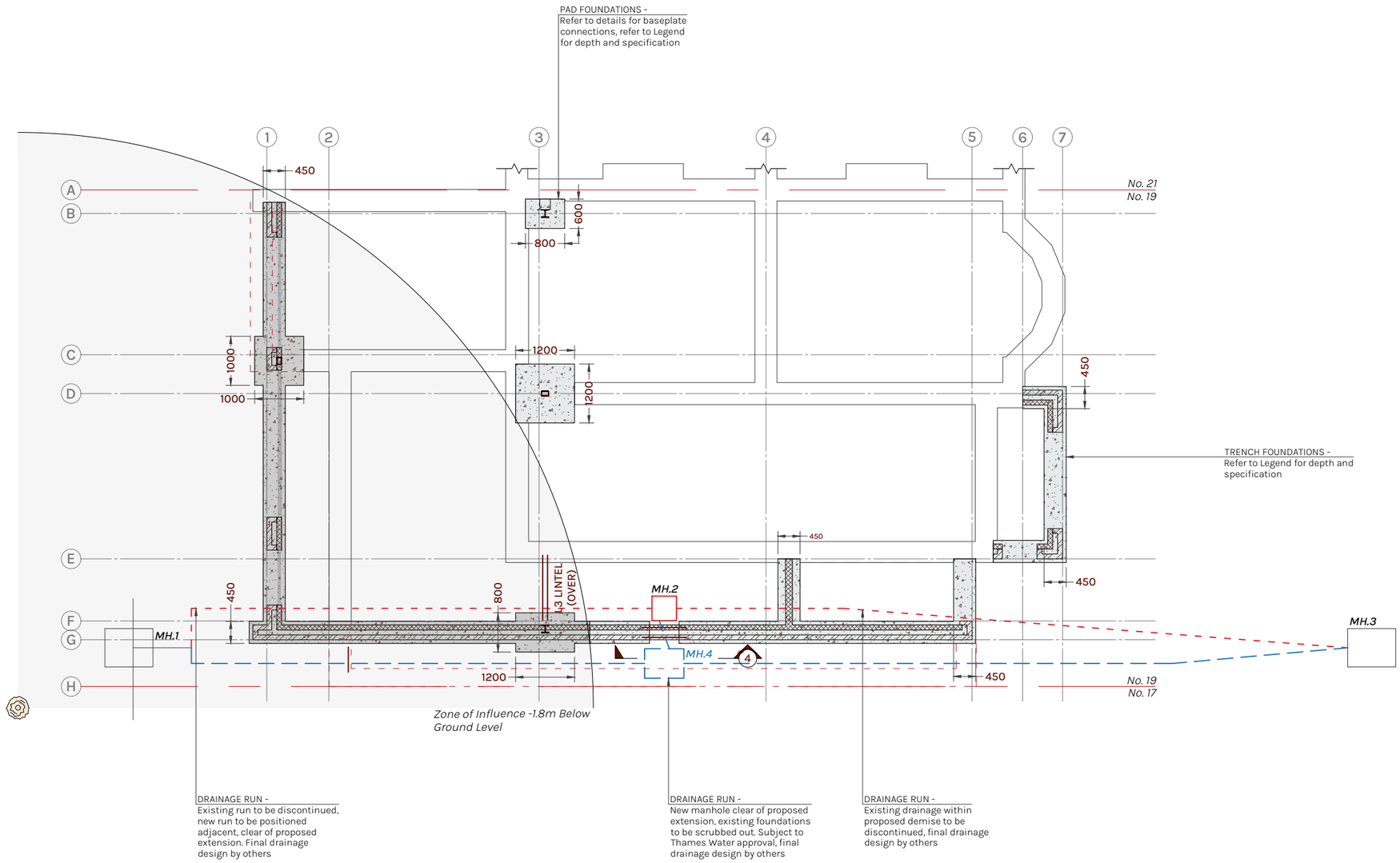
Leveling of joists to be agreed with Architect, Contractor to allow provisional sum for furring pieces.

Architect to notify Engineer of proposed heavy or brittle finishes including appliances and bath tubs. Or if heavy finishes or light fittings that are sensitive to vibration are proposed.

Allow for isolated structure supporting heavy ceiling finishes or light fittings, to be formed in steel or timber to be agreed with Structural Engineer.

Contractor to allow provisional sum to replace defective or rotten timbers with new C24 members matching size of existing

STANDARD DRAWING NOTES



LEGEND

New foundations to be mass concrete strip/pad footing formed from FND2 concrete. Foundations to be minimum 450mm thick unless noted otherwise on plan.

- Formation level of new foundations to be minimum **1000mm** deep, below existing ground level unless noted otherwise on plan/notes.
- Building Control Officer to confirm final depth.
- Foundations to at minimum, match formation level of existing adjacent foundations/footings
- Foundations within the vicinity of the below ground drainage pipe to be founded at least 150mm below invert level of drainage run, subject to Thames Water and Building Control review and approval
- If roots encountered, foundations to extend a minimum 300mm past deepest root

New foundations to be mass concrete strip/pad footing formed from FND2 concrete. Foundations to be minimum 450mm thick unless noted otherwise on plan.

- Formation level of new foundations to be minimum **1850mm** deep, below existing ground level unless noted otherwise on plan/notes.
- Building Control Officer to confirm final depth.
- Foundations to at minimum, match formation level of existing adjacent foundations/footings
- Foundations within the vicinity of the below ground drainage pipe to be founded at least 150mm below invert level of drainage run, subject to Thames Water and Building Control review and approval
- If roots encountered, foundations to extend a minimum 300mm past deepest root

Existing Foundations - To be retained and re-used

Approximate location of existing Manhole. To be retained and re-used

Denotes approximate position of existing drainage run to be discontinued

Denotes approximate position of proposed drainage run and proposed manhole

Drainage assets shown indicatively, refer to Integrum report. Final drainage design by others

Approximate position of tree. Assumed Wild Cherry, to be confirmed by Arboriculturist.

Foundation design based on moderate water demand tree in high-volume change potential soil (London Clay)

REV.	DATE.	ISSUE.
P.01	16.10.24	PRELIMINARY

NOT FOR CONSTRUCTION

NOTES

Walls red dashed to be demolished. Where new structure has not been specified for support over, Contractor to remove finishes and confirm if demolished wall is supporting walls/floor over and notify Structural Engineer.

Tree species conservatively assumed, final design subject to confirmation from Arboriculturist.

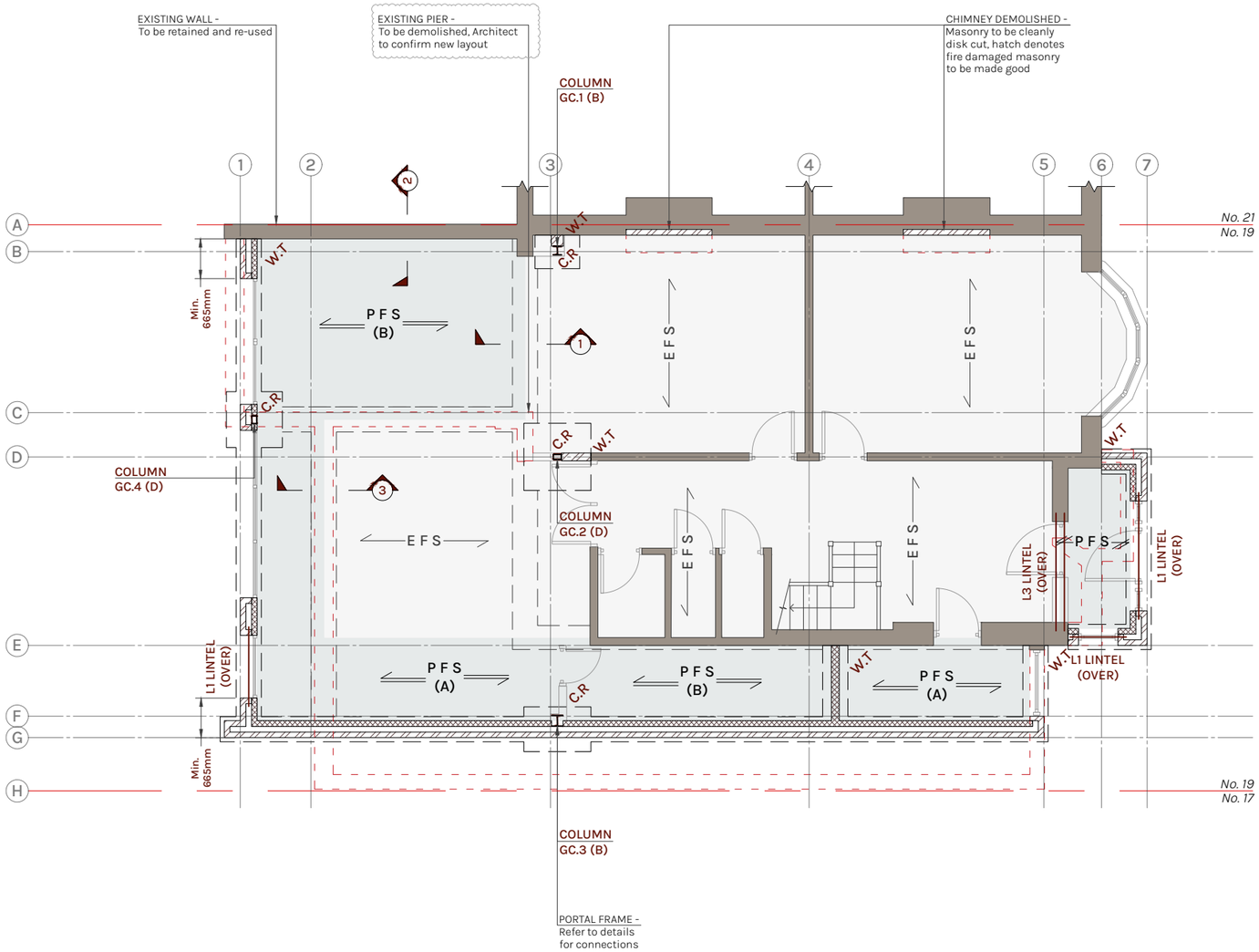
DRAWING TITLE. **FOUNDATION PLAN**

ADDRESS. EXAMPLE PROJECT 3

CLIENT. CONFIDENTIAL

SCALE.	DATE.
1:100@A3 /1:50@A1	OCTOBER 2024
PROJECT REF. 315	DRAWING REF. 090

SANDSTONE ENGINEERING



LEGEND

PADSTONE	SIZE [mm]	TYPE
P1	300x100x140	Pre-stressed Concrete Lintel
P2	450x100x140	Pre-stressed Concrete Lintel
P3	600x100x140	Pre-stressed Concrete Lintel
P4	300x215x150	Deep Mass Concrete Padstone

BEAM	SIZE
A	203x133x25 UKB
B	203x133x30 UKB
C	152x152x37 UKC
D	203x203x46 UKC
E	203x203x60 UKC
F	254x254x89 UKC
G	356x171x51 UKB

LINTEL	SIZE
L1	Catnic CG90/100
L2	Catnic CN71A
L3	2no. Naylor R6 Lintels
-	-

COLUMN	SIZE
A	152x152x37 UKC
B	203x203x46 UKC
C	100x100x10 SHS
D	150x100x10 RHS

Solid Brickwork Wall - As specified by Architect with class (iii) mortar. (F2 designation, minimum grade 20N/mm²)

Brickwork leaf - As specified by Architect with class (iii) mortar. (F2 designation, grade 10.0 N/mm² to be used below DPC)

Blockwork leaf - 7.0 N/mm² blocks with class (iii) mortar. (F2 designation, grade 10.0 N/mm² to be used below DPC)

W.T Wall Ties - Between new and existing walls. Use Ancon Staifix Universal Wall Starter Kit

C.R Column restraint - Restrained to adjacent wall by either:
- 2no 10mm thick tab plates - fixed to masonry via M12 resin anchors with Hilti HIT HY-270 resin, minimum embedment depth 100mm.
- 2no 1200mm long, 30x5mm thick steel restraint straps - fixed to masonry and column **(Both options installed at 1/3 and 2/3 of column height)**

Full strength moment connection

E F S — Assumed span of existing floor construction. Contractor to confirm span upon commencement of work and notify Sandstone Engineering if otherwise

P F S (A) — Span of proposed floor construction. 155mm deep Beam & block, 1900kg/m³ block density with 65mm infill screed. **CONDITION A - Precast beams at 520mm centres**

P F S (B) — Span of proposed floor construction. 155mm deep Beam & block, 1900kg/m³ block density with 65mm infill screed. **CONDITION B - Precast beams at 295mm centres**

Proprietary suspended beam and block floor system to be confirmed by the Manufacturer

P F S — Span of proposed floor construction. 150x50mm C24 timber joists at 400mm centres. 18mm thick marine plywood glued and screwed to top of joists with No.8 wood screws. Maximum 150mm spacing between screws along joists

REV.	DATE.	ISSUE.
P.01	16.10.24	PRELIMINARY

NOT FOR CONSTRUCTION

NOTES

Padstones and Steelwork to be tightly dry packed into position

Walls red dashed to be demolished. Where structure has not been specified for support over, Contractor to remove finishes and confirm if wall is supporting walls/floor over Structural Engineer to be notified.

Tree species conservatively assumed, final design subject to confirmation from Arboriculturist.

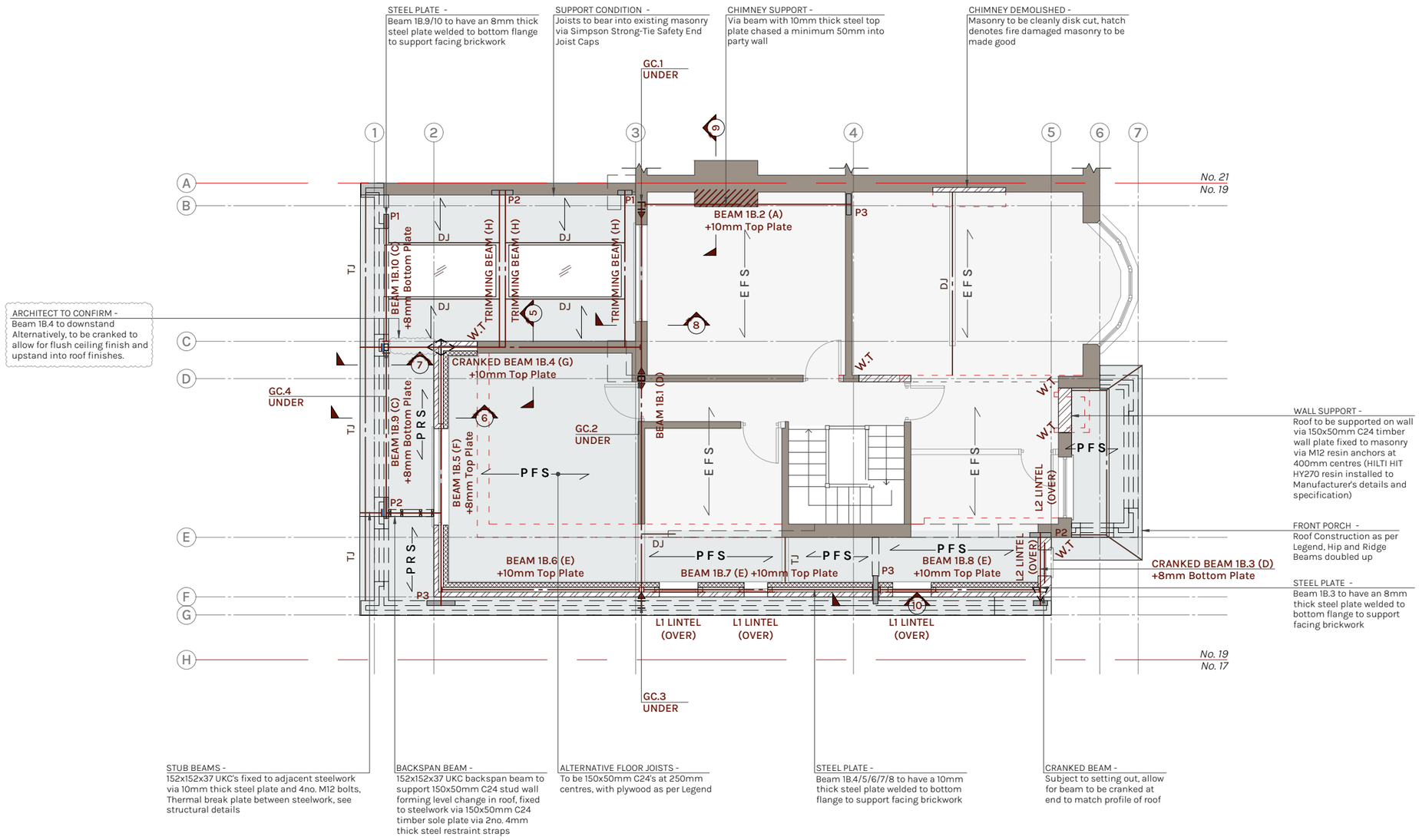
DRAWING TITLE. **GROUND FLOOR PLAN**

ADDRESS. EXAMPLE PROJECT 3

CLIENT. CONFIDENTIAL

SCALE.	DATE.
1:100@A3 /1:50@A1	OCTOBER 2024
PROJECT REF. 315	DRAWING REF. 100

SANDSTONE ENGINEERING



LEGEND

PADSTONE	SIZE [mm]	TYPE
P1	300x100x140	Pre-stressed Concrete Lintel
P2	450x100x140	Pre-stressed Concrete Lintel
P3	600x100x140	Pre-stressed Concrete Lintel
P4	300x215x150	Deep Mass Concrete Padstone

BEAM	SIZE
A	203x133x25 UKB
B	203x133x30 UKB
C	152x152x37 UKC
D	203x203x46 UKC
E	203x203x60 UKC
F	254x254x89 UKC
G	356x171x51 UKB
H	152x89x16 UKB

LINTEL	SIZE
L1	Catnic CG90/100
L2	Catnic CN71A
L3	2no. Naylor R6 Lintels
-	-

COLUMN	SIZE
A	152x152x37 UKC
B	203x203x46 UKC
C	100x100x10 SHS
D	150x100x10 RHS

Solid Brickwork Wall - As specified by Architect with class (iii) mortar. (F2 designation, minimum grade 20N/mm²)

Brickwork leaf - As specified by Architect with class (iii) mortar. (F2 designation, grade 10.0 N/mm² to be used below DPC)

Blockwork leaf - 7.0 N/mm² blocks with class (iii) mortar. (F2 designation, grade 10.0 N/mm² to be used below DPC)

W.T Wall Ties - Between new and existing walls. Use Ancon Staifix Universal Wall Starter Kit

Denotes internal load-bearing wall construction. 150x50mm C24 timber studs at 400mm centres. 12mm marine plywood glued and screwed to one face with No.8 wood screws with maximum 150mm spacing. Studs doubled up around openings

-- All studs to have sole plate to match proposed and be fixed to rafters via steel nail plates
-- All studs to have noggins installed at third positions vertically

C.R - Column restraint - Restrained to adjacent wall by either:
- 2no 10mm thick tab plates - fixed to masonry via M12 resin anchors with Hilti HIT HY-270 resin, minimum embedment depth 100mm.
- 2no 1200mm long, 30x5mm thick steel restraint straps - fixed to masonry and column **(Both options installed at 1/3 and 2/3 of column height)**

Full strength moment connection

Approximate position of crank in beam

Endplate Connection - 10mm thick welded endplates with 4no. M12 bolts, 10mm thick web stiffeners at point of connection

DJ - Double Joists
TJ - Triple Joists
DR - Double Rafters
TR - Triple Rafters

Joists denoted as DJ/TJ/QJ are to be multiple members bolted together using M12 black bolts at 400mm centres with 50x3mm square washer plates

E R S — Assumed span of existing floor construction. Contractor to confirm span upon commencement of work and notify Sandstone Engineering if otherwise

P F S — Span of proposed floor construction. 175x50mm C24 timber joists at 400mm centres. 18mm thick WBP plywood glued and screwed to top of joists with No.8 wood screws. Maximum 150mm spacing between screws along joists

P F S — Span of proposed roof construction. 150x50mm C24 timber joists at 400mm centres. 18mm thick marine plywood glued and screwed to top of joists with No.8 wood screws. Maximum 150mm spacing between screws along joists

P R S — Span of proposed roof construction. 150x50mm C24 timber joists at 400mm centres. 18mm thick marine plywood glued and screwed to top of joists with No.8 wood screws. Maximum 150mm spacing between screws along joists

REV.	DATE.	ISSUE.
P.01	16.10.24	PRELIMINARY

NOT FOR CONSTRUCTION

NOTES

Padstones and Beams are to be tightly dry packed into position

Walls red dashed to be demolished. Where structure has not been specified for support over, Contractor to remove finishes and confirm if wall is supporting walls/floor over Structural Engineer to be notified.

Unhatched walls non-load bearing. To be constructed to Architect's specification, assumed lightweight timber, Structural Engineer to be notified if otherwise

Rooflights, staircases and balustrades designed and supplied by Specialist Subcontractor. Framed with timbers/steels shown on plan

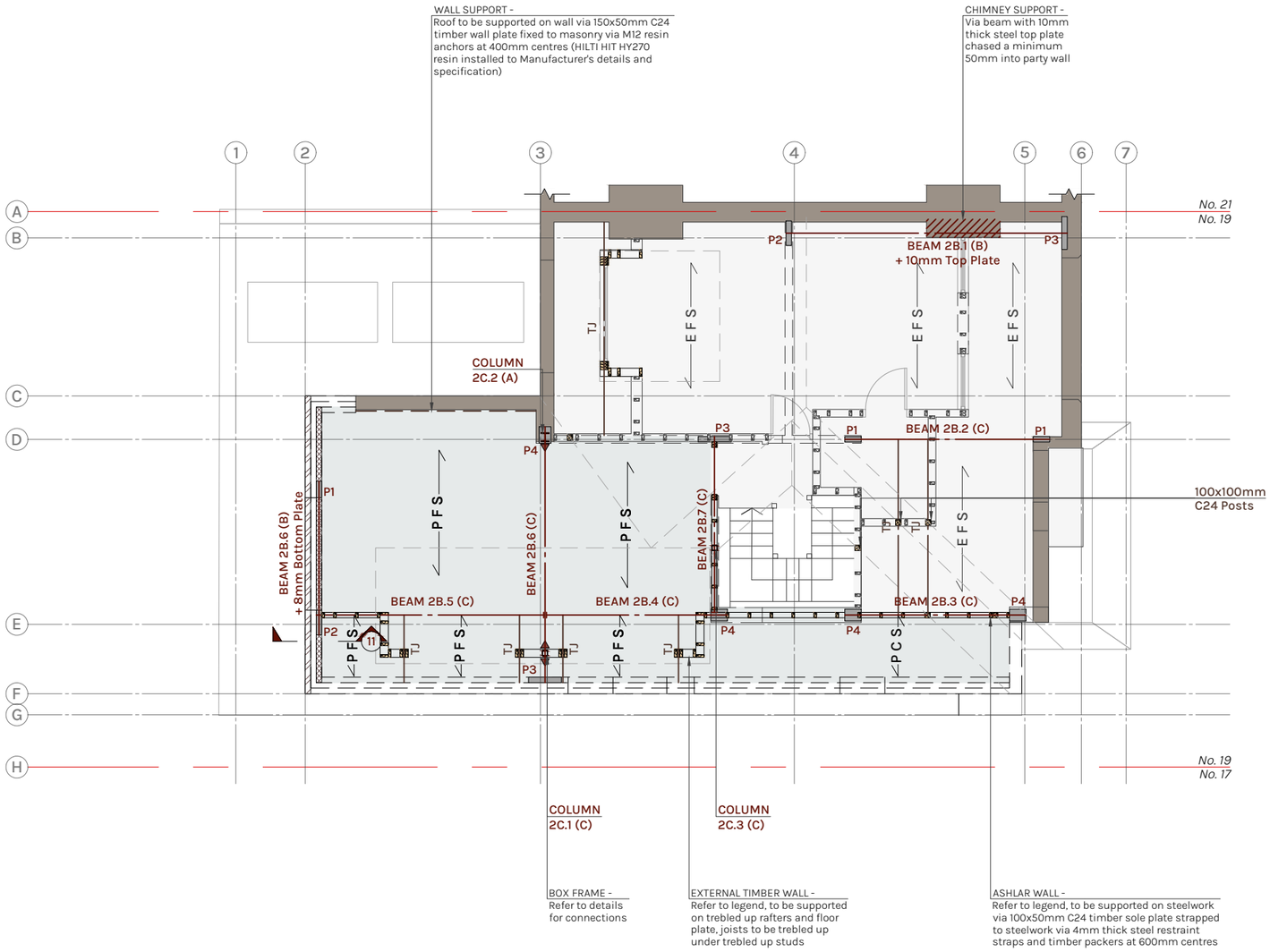
DRAWING TITLE. **FIRST FLOOR PLAN**

ADDRESS. EXAMPLE PROJECT 3

CLIENT. CONFIDENTIAL

SCALE.	DATE.
1:100@A3 /1:50@A1	OCTOBER 2024
PROJECT REF. 315	DRAWING REF. 110

SANDSTONE ENGINEERING



LEGEND

PADSTONE	SIZE [mm]	TYPE
P1	300x100x140	Pre-stressed Concrete Lintel
P2	450x100x140	Pre-stressed Concrete Lintel
P3	600x100x140	Pre-stressed Concrete Lintel
P4	300x215x150	Deep Mass Concrete Padstone

BEAM	SIZE
A	203x133x25 UKB
B	203x133x30 UKB
C	152x152x37 UKC
D	203x203x46 UKC
E	203x203x60 UKC
F	254x254x89 UKC
G	356x171x51 UKB

LINTEL	SIZE
L1	Catnic CG90/100
L2	Catnic CN71A
L3	2no. Naylor R6 Lintels
-	-

COLUMN	SIZE
A	152x152x37 UKC
B	203x203x46 UKC
C	100x100x10 SHS
D	150x100x10 RHS

Solid Brickwork Wall - As specified by Architect with class (iii) mortar. (F2 designation, minimum grade 20N/mm²)

Brickwork leaf - As specified by Architect with class (iii) mortar. (F2 designation, grade 10.0 N/mm² to be used below DPC)

Blockwork leaf - 7.0 N/mm² blocks with class (iii) mortar. (F2 designation, grade 10.0 N/mm² to be used below DPC)

W.T Wall Ties - Between new and existing walls. Use Ancon Staifix Universal Wall Starter Kit

Denotes internal load-bearing wall construction. 100x50mm C24 timber studs at 400mm centres. 12mm marine plywood glued and screwed to one face with No.8 wood screws with maximum 150mm spacing. Studs doubled up around openings

Denotes internal load-bearing wall construction. 150x50mm C24 timber studs at 400mm centres. 12mm marine plywood glued and screwed to one face with No.8 wood screws with maximum 150mm spacing. Studs doubled up around openings

-- All studs to have sole plate to match proposed and be fixed to rafters via steel nail plates
-- All studs to have noggins installed at third positions vertically

C.R Column restraint - Restrained to adjacent wall by either:
- 2no 10mm thick tab plates - fixed to masonry via M12 resin anchors with Hilti HIT HY-270 resin, minimum embedment depth 100mm.
- 2no 1200mm long, 30x5mm thick steel restraint straps - fixed to masonry and column **(Both options installed at 1/3 and 2/3 of column height)**

Full strength moment connection

Approximate position of crank in beam

Endplate Connection - 10mm thick welded endplates with 4no. M12 bolts, 10mm thick web stiffeners at point of connection

DJ - Double Joists
TJ - Triple Joists
DR - Double Rafters
TR - Triple Rafters

Joists denoted as DJ/TJ/QJ are to be multiple members bolted together using M12 black bolts at 400mm centres with 50x3mm square washer plates

E F S — Assumed span of existing floor construction. Contractor to confirm span upon commencement of work and notify Sandstone Engineering if otherwise

P F S — Span of proposed floor construction. 150x50mm C24 timber joists at 400mm centres. 18mm thick WBP plywood glued and screwed to top of joists with No.8 wood screws. Maximum 150mm spacing between screws along joists

P C S — Span of proposed floor construction. 150x50mm C24 timber joists at 400mm centres. 18mm thick WBP plywood glued and screwed to top of joists with No.8 wood screws. Maximum 150mm spacing between screws along joists

REV.	DATE.	ISSUE.
P.01	16.10.24	PRELIMINARY

NOT FOR CONSTRUCTION

NOTES

Padstones and Beams are to be tightly dry packed into position

Walls red dashed to be demolished. Where structure has not been specified for support over, Contractor to remove finishes and confirm if wall is supporting walls/floor over Structural Engineer to be notified.

Unhatched walls non-load bearing. To be constructed to Architect's specification, assumed lightweight timber, Structural Engineer to be notified if otherwise

Rooflights, staircases and balustrades designed and supplied by Specialist Subcontractor. Framed with timbers/steels shown on plan

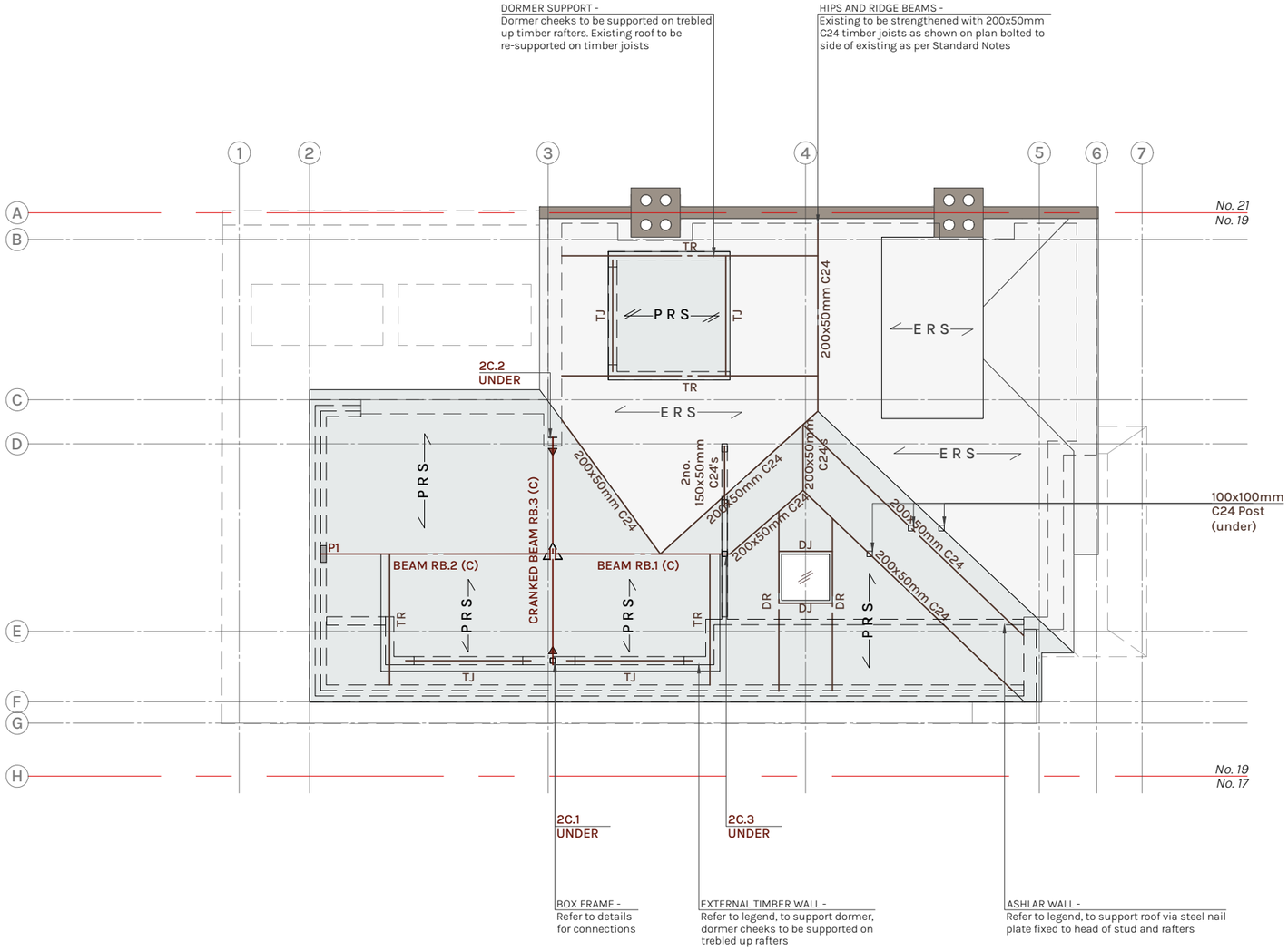
DRAWING TITLE. **SECOND FLOOR PLAN**

ADDRESS. EXAMPLE PROJECT 3

CLIENT. CONFIDENTIAL

SCALE.	DATE.
1:100@A3 /1:50@A1	OCTOBER 2024
PROJECT REF. 315	DRAWING REF. 120

SANDSTONE ENGINEERING



LEGEND

PADSTONE	SIZE [mm]	TYPE
P1	300x100x140	Pre-stressed Concrete Lintel
P2	450x100x140	Pre-stressed Concrete Lintel
P3	600x100x140	Pre-stressed Concrete Lintel
P4	300x215x150	Deep Mass Concrete Padstone

BEAM	SIZE
A	203x133x25 UKB
B	203x133x30 UKB
C	152x152x37 UKC
D	203x203x46 UKC
E	203x203x60 UKC
F	254x254x89 UKC
G	356x171x51 UKB

LINTEL	SIZE
L1	Catnic CG90/100
L2	Catnic CN71A
L3	2no. Naylor R6 Lintels
-	-

COLUMN	SIZE
A	152x152x37 UKC
B	203x203x46 UKC
C	100x100x10 SHS
D	150x100x10 RHS

Solid Brickwork Wall - As specified by Architect with class (iii) mortar. (F2 designation, minimum grade 20N/mm²)

Brickwork leaf - As specified by Architect with class (iii) mortar. (F2 designation, grade 10.0 N/mm² to be used below DPC)

Blockwork leaf - 7.0 N/mm² blocks with class (iii) mortar. (F2 designation, grade 10.0 N/mm² to be used below DPC)

W.T Wall Ties - Between new and existing walls. Use Ancon Staifix Universal Wall Starter Kit

Denotes internal load-bearing wall construction. 100x50mm C24 timber studs at 400mm centres. 12mm marine plywood glued and screwed to one face with No.8 wood screws with maximum 150mm spacing. Studs doubled up around openings

Denotes internal load-bearing wall construction. 150x50mm C24 timber studs at 400mm centres. 12mm marine plywood glued and screwed to one face with No.8 wood screws with maximum 150mm spacing. Studs doubled up around openings

-- All studs to have sole plate to match proposed and be fixed to rafters via steel nail plates
-- All studs to have noggins installed at third positions vertically

C.R Column restraint - Restrained to adjacent wall by either:
- 2no 10mm thick tab plates - fixed to masonry via M12 resin anchors with Hilti HIT HY-270 resin, minimum embedment depth 100mm.
- 2no 1200mm long, 30x5mm thick steel restraint straps - fixed to masonry and column **(Both options installed at 1/3 and 2/3 of column height)**

Full strength moment connection

Approximate position of crank in beam

Endplate Connection - 10mm thick welded endplates with 4no. M12 bolts, 10mm thick web stiffeners at point of connection

DJ - Double Joists
TJ - Triple Joists
DR - Double Rafters
TR - Triple Rafters

Joists denoted as DJ/TJ/QJ are to be multiple members bolted together using M12 black bolts at 400mm centres with 50x3mm square washer plates

E R S Assumed span of existing floor construction. Contractor to confirm span upon commencement of work and notify Sandstone Engineering if otherwise

P R S Span of proposed roof construction. 150x50mm C24 timber joists at 400mm centres. 18mm thick marine plywood glued and screwed to top of joists with No.8 wood screws. Maximum 150mm spacing between screws along joists

REV.	DATE.	ISSUE.
P.01	16.10.24	PRELIMINARY

NOT FOR CONSTRUCTION

NOTES

Padstones and Beams are to be tightly dry packed into position

Walls red dashed to be demolished. Where structure has not been specified for support over, Contractor to remove finishes and confirm if wall is supporting walls/floor over Structural Engineer to be notified.

Unhatched walls non-load bearing. To be constructed to Architect's specification, assumed lightweight timber, Structural Engineer to be notified if otherwise

Rooflights, staircases and balustrades designed and supplied by Specialist Subcontractor. Framed with timbers/steels shown on plan

DRAWING TITLE. **ROOF PLAN**

ADDRESS. EXAMPLE PROJECT 3

CLIENT. CONFIDENTIAL

SCALE.	DATE.
1:100@A3 /1:50@A1	OCTOBER 2024
PROJECT REF. 315	DRAWING REF. 130

SANDSTONE ENGINEERING

NON STRUCTURAL BUILD-UP -
Finishes, screed and insulation to
Architect's details and specification/
Contractor design portion

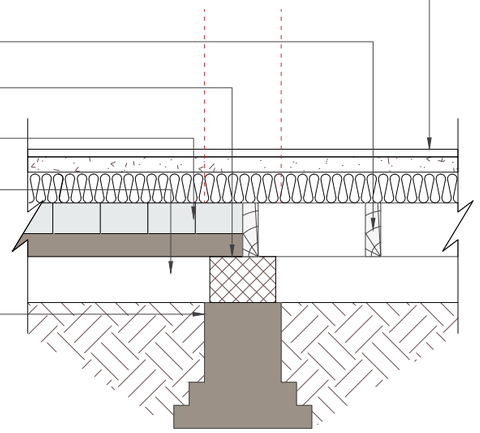
EXISTING FLOOR CONSTRUCTION -
To remain unchanged

HONEYCOMBED 'DWARF' WALL -
Formed from frost resistant blockwork

PROPOSED FLOOR CONSTRUCTION -
Refer to drawing 100 for specification

VENTILATION VOID -
Minimum 150mm, unless specified
otherwise by Architect

EXISTING FOUNDATIONS -
To remain unchanged



DETAIL 1

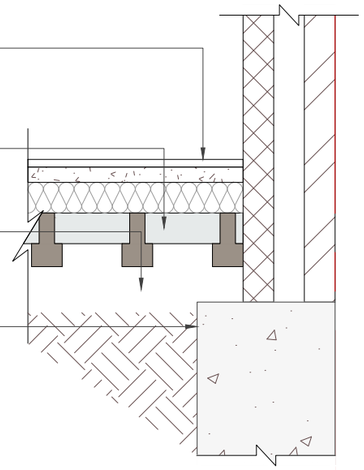
1:20

NON STRUCTURAL BUILD-UP -
Finishes, screed and insulation to
Architect's details and specification/
Contractor design portion

PROPOSED FLOOR CONSTRUCTION -
Refer to drawing 100 for specification

VENTILATION VOID -
Minimum 150mm, unless specified
otherwise by Architect

EXISTING FOUNDATIONS -
To remain unchanged



DETAIL 2

1:20

NON STRUCTURAL BUILD-UP -
Finishes, screed and insulation to
Architect's details and specification/
Contractor design portion

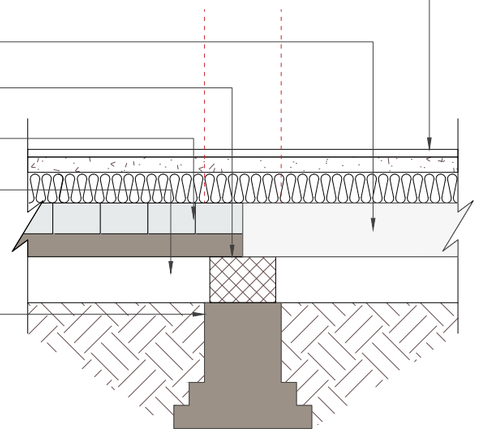
EXISTING FLOOR CONSTRUCTION -
To remain unchanged

HONEYCOMBED 'DWARF' WALL -
Formed from frost resistant blockwork

PROPOSED FLOOR CONSTRUCTION -
Refer to drawing 100 for specification

VENTILATION VOID -
Minimum 150mm, unless specified
otherwise by Architect

EXISTING FOUNDATIONS -
To remain unchanged

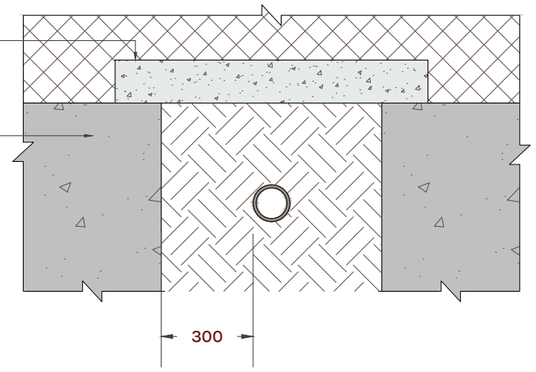


DETAIL 3

1:20

BRIDGING LINTELS -
As per Structural Plan 090
To bear a minimum 150mm
onto foundations either side

NEW FOUNDATIONS -
To stop short 300mm from edge
of existing pipe if IL > 1100mm
To stop short 150mm from edge
of existing pipe if IL < 1100mm



TYPICAL BRIDGING DETAIL

1:20

REV.	DATE.	ISSUE.
P.01	16.10.24	PRELIMINARY

NOT FOR CONSTRUCTION

NOTES

Padstones and Beams are to be tightly dry packed into position

Existing foundation depths to be confirmed upon commencement of works, Engineer to be notified of findings

Setting out to Architect's details and specification, levels shown indicatively

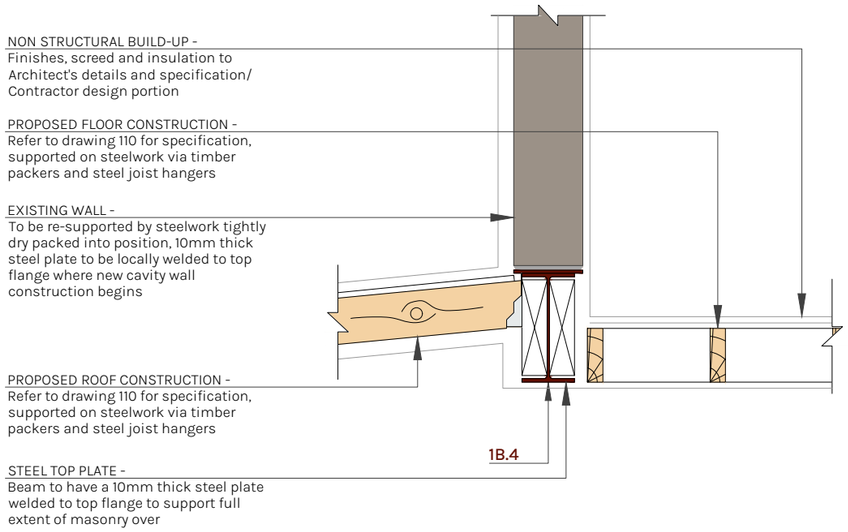
DRAWING TITLE. **STRUCTURAL DETAILS 1**

ADDRESS. EXAMPLE PROJECT 3

CLIENT. CONFIDENTIAL

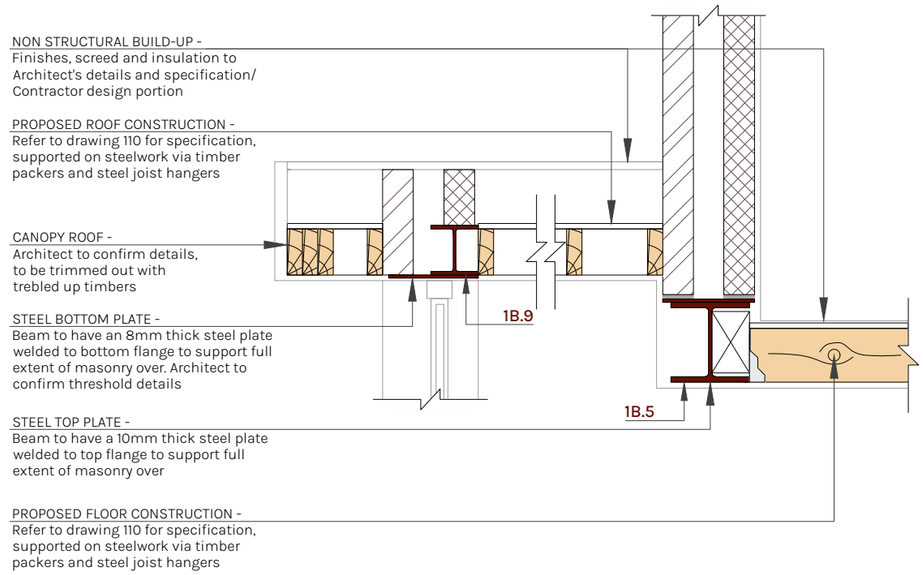
SCALE.	DATE.
1:20@A3 /1:10@A1	OCTOBER 2024
PROJECT REF. 315	DRAWING REF. 200

SANDSTONE ENGINEERING



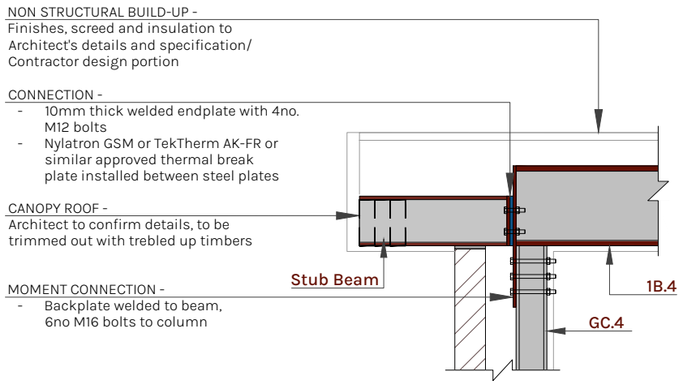
DETAIL 5

1:20



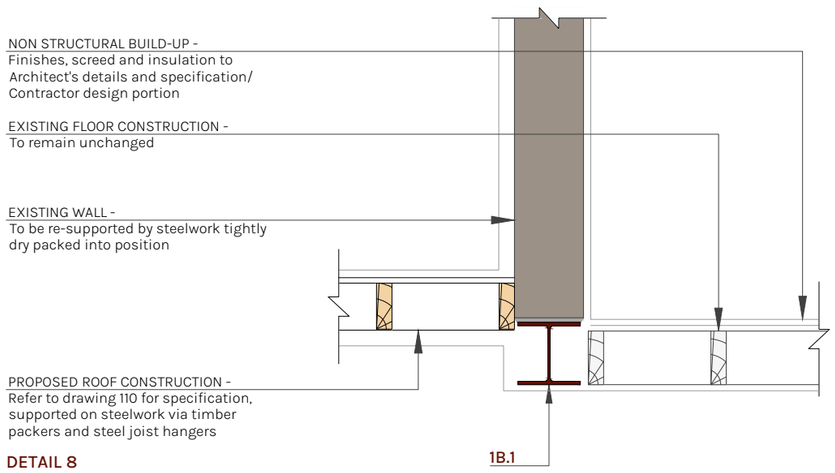
DETAIL 6

1:20



DETAIL 7

1:20



DETAIL 8

1:20

REV.	DATE.	ISSUE.
P.01	16.10.24	PRELIMINARY

NOT FOR CONSTRUCTION

NOTES

Padstones and Beams are to be tightly dry packed into position

Existing foundation depths to be confirmed upon commencement of works, Engineer to be notified of findings

Setting out to Architect's details and specification, levels shown indicatively

All welds to be 6mm thick full face fillet welds unless noted otherwise

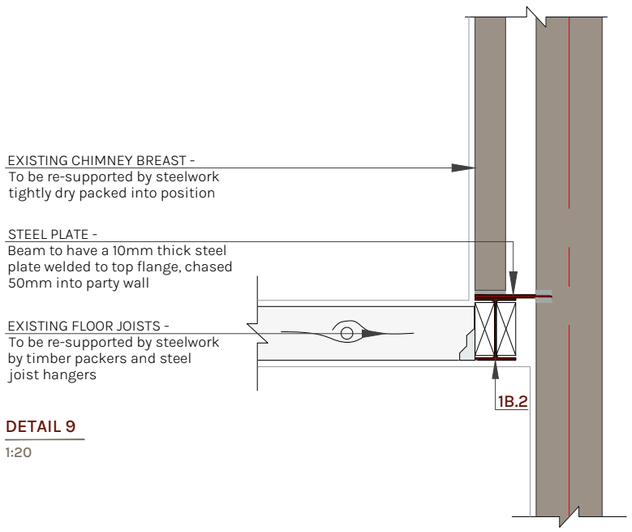
DRAWING TITLE. **STRUCTURAL DETAILS 2**

ADDRESS. EXAMPLE PROJECT 3

CLIENT. CONFIDENTIAL

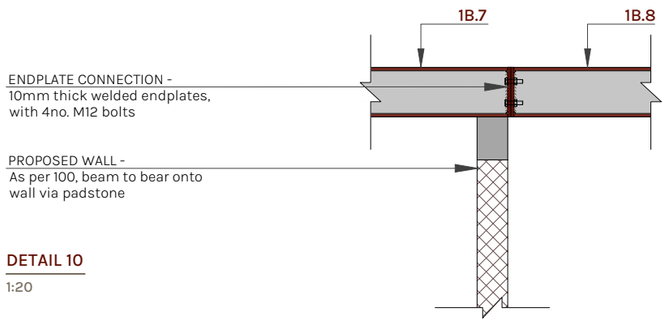
SCALE.	DATE.
1:20@A3 /1:10@A1	OCTOBER 2024
PROJECT REF. 315	DRAWING REF. 200

SANDSTONE ENGINEERING



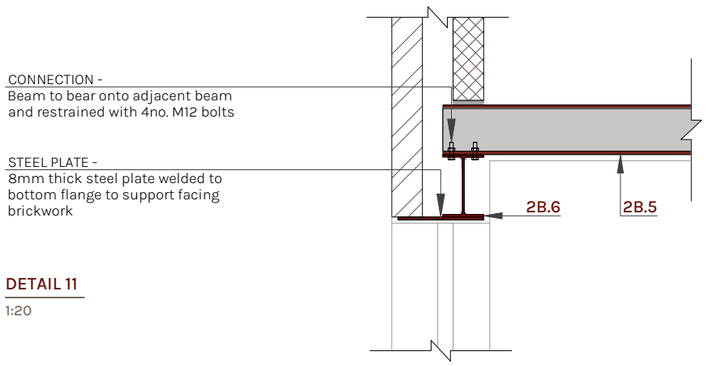
DETAIL 9

1:20



DETAIL 10

1:20



DETAIL 11

1:20

REV.	DATE.	ISSUE.
P.01	16.10.24	PRELIMINARY

NOT FOR CONSTRUCTION

NOTES

Padstones and Beams are to be tightly dry packed into position

Existing foundation depths to be confirmed upon commencement of works, Engineer to be notified of findings

Setting out to Architect's details and specification, levels shown indicatively

All welds to be 6mm thick full face fillet welds unless noted otherwise

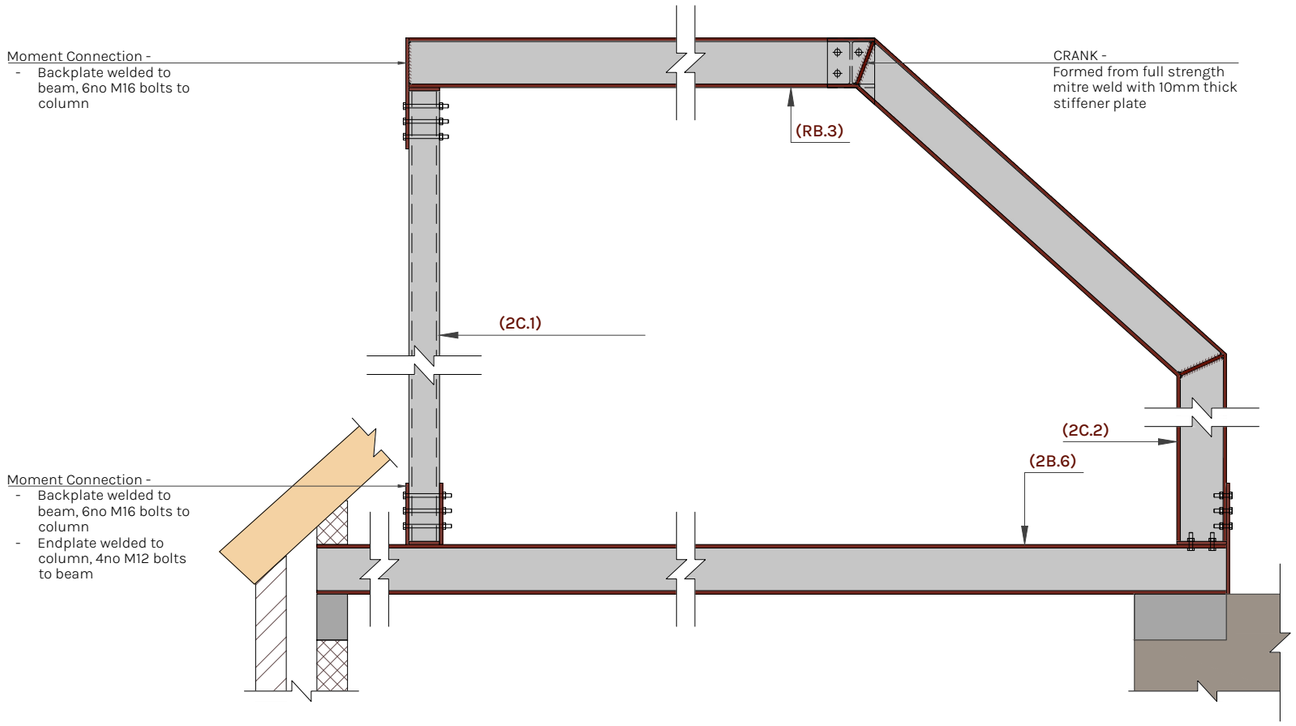
DRAWING TITLE. **STRUCTURAL DETAILS 3**

ADDRESS. EXAMPLE PROJECT 3

CLIENT. CONFIDENTIAL

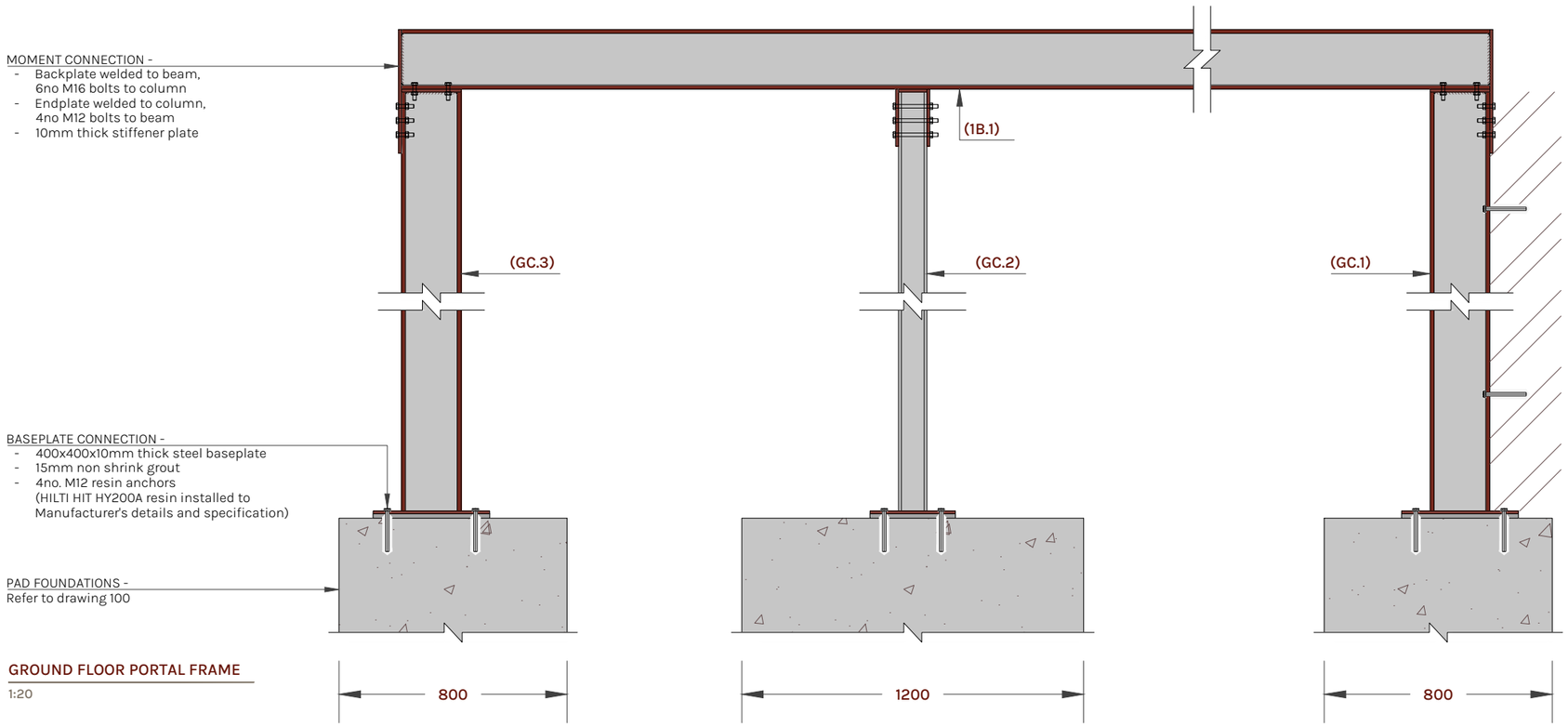
SCALE.	DATE.
1:20@A3 /1:10@A1	OCTOBER 2024
PROJECT REF. 315	DRAWING REF. 220

SANDSTONE ENGINEERING



SECOND FLOOR - BOX FRAME

1:20



GROUND FLOOR PORTAL FRAME

1:20

REV.	DATE.	ISSUE.
P.01	16.10.24	PRELIMINARY

NOT FOR CONSTRUCTION

NOTES

Final steelwork setting out by Architect

Unless noted otherwise, welds to be 6mm thick full face fillet welds

Connections shown indicatively for costing. Final steelwork connection design within CDP. Sandstone Engineering to be contacted for connection forces.

Structural Engineer to receive electronic copy of fabrication drawings and calculations, as well as Subcontractor design elements. To be issued with allowance of 10 working days for preparation of comments

DRAWING TITLE. **STRUCTURAL DETAILS 4**

ADDRESS. EXAMPLE PROJECT 3

CLIENT. CONFIDENTIAL

SCALE.	DATE.
1:20@A3 /1:10@A1	OCTOBER 2024
PROJECT REF. 315	DRAWING REF. 230

SANDSTONE ENGINEERING