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1.1

Do not scale drawings.

1.2

The Structural Engineering drawings are to be read in conjunction with Architect's and all other Consultant's drawings and specifications, which should be used to verify layout, setting out, finishes, etc. Any discrepancies are to be brought to the attention of the Architect prior to construction. The Contractor is to check all dimensions on site before carrying out works. The Contractor is to inform the Architect and Engineer if the existing fabric, including foundations, is opened up and found to be inadequate, unsuitable to support the proposed works, or at variance from the details shown on the drawings.

1.3

Structural Engineers drawings, specifications and any other documentation will be issued electronically only. Should the Contractor require any hard copies they must be specifically requested. The costs (including the Structural Engineer's time) associated with preparing and issuing these hard copy drawings will be invoiced directly to and must be paid by the Contractor.

1.4

Drawings and other documents will only be issued in .pdf format. No other file types will be issued (i.e. dwg, dxt, dgn, etc. files will not be issued).

1.5

The Contractor/Sub-Contractor is to include within their tender submission everything that is required to fully construct the structure even if elements are not specifically listed in a bill of quantities. This includes all materials, allowance for all means and methods required and all the time needed to complete the work.

1.6

Should the Contractor, or any sub-Contractors, believe that any elements of the work on Structural Engineers' drawings or specification will provide buildability difficulties as indicated, they must state clearly, at tender stage, their concerns along with specific reasons for it. They must also propose more buildable alternatives for consideration that do not compromise the Architecture or overall structure of the work. Any claims or objections based on buildability issues that are raised after tender will not be considered.

1.7

Items noted on the drawings 'to be verified on site' or similar are to be exposed by the Contractor for inspection by the Engineer at the earliest opportunity.

1.8

The Contractor must ensure that all necessary party wall/floor notices have been agreed prior to carrying out works under, on or adjacent to party wall, floors, boundary walls or other boundary structures.

1.9

Nothing included or omitted from these general notes will relieve the Contractor of his duty to carry out the works in accordance with current standards of safety and good building practice.

1.10

All dimensions and levels shown on the drawings are based on survey or archive drawings and the Contractor is to satisfy himself that dimensions, levels, etc., are sufficiently accurate and complete for fabrication within the specified tolerances of all fabricated elements.

1.11

All specified products are to be installed/built in strict accordance with manufacturer's recommendations. Any substitution of designed elements or specified products will be at the Contractor's expense and shall not cause any delays. The Contractor will be liable for any costs, including time spent researching, designing, checking and drawing the alternative proposals, incurred by the Structural Engineer in incorporating or investigating these proposals. If a substitution is considered and rejected by the Structural Engineer, no reason for the rejection will necessarily be provided. This will be at the discretion of the engineer.

1.12

All water and damp proofing works to be to Architect's details. Where the Structural Engineers drawing shows waterproof or damp proof membranes, they are simply intended to indicate their position in relation to the structure. The membranes have been designed, specified and detailed by the Architect or the manufacturers and are to be installed as shown on their drawings.

1.13

All fire protection and finishes are to the Architect's details unless specifically noted otherwise. All floor separation details and acoustic isolation are to the Architect's details.

1.14

Typically, all non-loadbearing partitions are omitted for clarity. Refer to the Architect's drawings for details.

1.15

The existing structural information shown on these drawings is based on visual inspection of the building and limited opening up works.

1.16

All details of the existing construction are subject to confirmation by the Contractor prior to commencement of the works on site. No materials are to be ordered until the relevant details and conditions are confirmed by the Contractor on site.

2

Timings, Notice & Submittals

2.1

Whilst we will endeavour to respond to queries at the earliest opportunity, in the first instance, the following timings should be allowed:

2.2

Information Required Schedule (IRS)

2.2.1

Contractor to submit prior to pre-start meeting for review and comment.

2.2.2

Period of notice (minimum): 10 working days.

2.3

Request for Information (RFI)

2.3.1

Contractor to coordinate with the Programme and submit in good time for review and comment.

2.3.2

Period of notice (minimum): 10 working days.

2.4

Before preparing detailed shop drawings, submit:

2.4.1

General arrangement drawings with individual members, conflicts with other work and proposed changes to contract drawings clearly identified. Submit before preparing calculations.

2.4.2

Calculations / selected standard joint detail for major connections.

2.4.3

Period of notice (minimum): 10 working days.

2.5

Give notice before fabrication is due to start.

2.5.1

Period of notice (minimum): 10 working days.

2.6

Contractor proposals

2.7

Should there be a clash/problem arising from the Contractor's proposals (say for secondary structure) which adversely affects the structure, the Contractor will have to re-design their system to allow for this. Sufficient time and cost should be allowed for this in the price and programme.

2.8

The Engineer's comments on drawings will centre on compliance with the design intent and exclude dimensional checks.

3

Excavation, Filling and Corecure

3.1

Areas to be filled are to be free from loose soil, organic material, rubbish, standing water and unfrozen.

3.2

Do not overload adjacent structures, membranes or buried surfaces.

3.3

Compact fill as soon as possible after placing. Surface layer to be well closed, showing no sign of movement under compaction plant and without cracks, holes, ridges, loose material or the like. Remove and re-compact defective areas.

3.4

Hardcore shall be clean hard brick, cement, concrete, hard tiles, stone or ballast broken before placing to pass through a 75mm ring and suitably graded so as to be capable of thorough compaction and free from all rubbish, contamination and wood rot infection and having a low sulphate content to be a minimum of 150mm thick. Where applicable, the soil type, foundation depths, etc are shown on the drawings or recorded in the site investigation report (if a site investigation report or trial pit information has been provided for this project). Refer to the project Structural Engineer for confirmation of the extent of investigative work already completed and any further investigative work required.

3.5

Refer to SI report (ref GeoCon Site Investigations Ltd, GSI 1813 HH GI Report V1) for ground water levels.

3.6

Inspect all available drawings and make enquiries about existing services on site. Verify positions and depth of all services before commencement of work on site. Services that are being retained during any phase of the works are to be protected.

3.7

Where an excavation encroaches below a line drawn at an angle of 45° from the horizontal from the nearest formation level of another higher excavation, the lower excavation, all work within it and backfilling thereto must be completed before the higher excavation is made.

3.8

Backfill any excavations for foundations taken deeper than required with lean mix concrete. Excavations other than foundations taken deeper than required may be backfilled with well graded granular material.

3.9

Make advance arrangements with the Building Control officer and/or Architect for inspection of foundations and trenches requested at the beginning of the works.

3.10

Remove the last 150mm of excavations just before inspection. Trim excavations to required profiles and levels, and remove all loose materials.

3.11

Unless otherwise instructed seal formations within four hours of inspection with concrete or other specified fill.

3.12

Hardcore to be granular material, free from harmful matter, well graded, passing a 75mm BS sieve and one of the following:

3.12.1

Crushed concrete, brick or tile, free from old plaster.

3.12.2

Gravel.

3.13

Spread and level both backfilling and general filling in layers not exceeding 150mm. Thoroughly compact each layer with a vibratory roller, vibrating plate compactor, vibro-tamper, power rammer or other suitable means appropriate to the area being worked.

3.14

Hardcore underneath bearing concrete slabs to be as above and not less than 150mm thick, UNO on the drawings.

3.15

Excavate extra material as necessary. Increase thickness of hardcore as necessary to make up levels from stripped site levels to underside of slabs. Dig out areas of soft material and backfill with hardcore compacted in 150mm thick layers.

3.16

Surfaces over hardcore to receive sheet overlays or concrete to be blinded with sufficient sand or fine gravel to fill interstices and provide a close smooth surface (50mm min thickness), UNO on the drawings.

3.17

Permissible deviations on surface level to be +0 -15mm. Provide gauge 1200 polythene curing membrane on top of blinding prior to casting concrete (note; - this polythene is not intended to act as a DPM, refer to Architect's details for DPM). Gauge 1200 polythene sheet is to be lapped a minimum of 300mm at joints and sealed.

4

Temporary Works & Stability:

4.1

The Contractor is entirely responsible for maintaining the stability of all existing buildings and structures, within and adjacent to the works, and of all the works from the date of possession of the site until practical completion of the works.

4.2

The Contractor shall design, install and maintain all necessary temporary works and shall advise the Architect and Engineer, before commencement of the works, of his proposals for temporary supports and sequence of construction for the works. These proposals shall be supported by design calculations.

4.3

The design of temporary works shall include an assessment of the loads to be resisted and is to be undertaken by a competent person. Due regard shall be given to lateral stability as well as to the support of vertical loads. In addition, the Contractor shall ensure that loads are transferred from temporary supports/props to the permanent structure without resulting in excessive deflection/movement of the temporary or permanent structure.

4.4

The Contractor is responsible for the design, installation and maintenance of all necessary temporary works to ensure the strength and stability of the building throughout the course of the works.

4.4.1

The Contractor must confirm details and qualifications of the person responsible for all temporary works design (called the 'temporary works designer/co-ordinator') when returning the tender.

4.4.2

Full design details (drawings and calculations) are required for comment by the Engineer for all temporary support systems. Electronic copies of all details for comment are to be issued allowing ten working days for preparation of comments by the Engineer.

4.5

No splices in any members shall be permitted unless detailed on the Structural Engineers' tender drawings. The tender price and programme must include for installing all elements without splices, unless shown on the Structural Engineers' tender drawings.

4.6

Should the Contractor feel that any members pose installation problems without splicing this must be clearly presented at tender stage, with a proposed solution detailing how the Contractor would address the difficulty.

4.7

The temporary works proposals shall reference, but not limit itself to, the following items:

4.7.1

All temporary support required to maintain vertical and lateral stability of existing and new structures during construction. This is to include all temporary surfaces required to allow the construction to proceed.

4.7.2

Method statement detailing the proposed method of ensuring the safety and stability of neighbouring structures throughout the construction phase including temporary works sequence drawings.

4.7.3

Appropriate monitoring including details of risk assessment thresholds and contingency measures.

4.7.4

Provision to retain at the property throughout the construction phase a suitably qualified/experienced site engineer to monitor and inspect the temporary and permanent works.

4.7.5

Mitigation measures for de-watering

4.7.6

Underpin sequencing plan.

4.7.7

Outline excavation sequence.

4.7.8

Movement Monitoring proposals if necessary.

4.7.9

Pre-condition surveys of adjoining properties.

4.8

Vibration of existing structures. The contractor is to ensure that measures are taken to protect the residents, users of buildings close by and passers-by from nuisance or harm and to protect existing buildings and structures both within and adjacent to the site from physical damage

5

Demolition:

5.1

Refer to Architect's drawings for extents of demolition.

5.2

Demolition is to be undertaken in the reverse order of construction. No part of the structure is to be left in an unsupported condition overnight or for long periods.

5.3

Demolition is to be undertaken in a manner that avoids excessive noise and nuisance. The Contractor shall ensure that the works do not cause damage or movement to buildings/structures in the vicinity.

5.4

All work is to be well-watered to minimise dust. All material is to be removed from site as soon as practicable.

6

General Structural Basis:

6.1

Deflection Limits:

6.1.1

Vertical deflections of floor slabs and supporting beams will be limited to the following: Slabs and beams generally:

Load Type/Location	Span/x or Absolute Value
General:	
Dead and live loads	span/250
Live load only	span/360
Facade line edge deflection	span/500 ± 20mm
Cantilevers:	
Dead and live loads	span/125
Live loads only	span/175± 20mm
Differential deflection between any two floors	±20mm

6.1.2

Horizontal deflection: Under wind loads / Sway

Load Type/Location	Span/x or Absolute Value
For primary framing (sway of multi storey columns)	H/300
For primary framing (sway of multi storey columns with glazed cladding)	H/500
For secondary framing supporting glazed cladding	Span/500
For secondary framing supporting other cladding	Span/360
For Curtain wall mullions and transoms (single glazed)	Span/175
For Curtain wall mullions and transoms (double glazed)	Span/125

6.1.3

All finishes, cladding, services, etc. will need to be detailed to accommodate the movements indicated above.

6.2

All structural beams, columns and walls are to be fire protected in accordance with the architect's details, fire consultant's report and current building regulations. Allow for Inherent protection to structural elements to be R30. Unless noted otherwise. Walls are assumed to have fire to one side only.

7

Permanent Stability System and Disproportionate Collapse

7.1

Disproportionate collapse: the building is classified as Class 3 with regards to disproportionate collapse in accordance with Building Regulations Part A.

7.2

The lateral stability of the superstructure is provided via the RC Core wall.

7.3

Cantilever load is taken by the vertical Vierendeel frames which are tied back to the core by the floors

7.4

Design working life of the structure is 50 years in accordance with Eurocodes

8

Materials and Workmanship:

8.1

The articles, materials and goods shall be new and of good quality, suitable for the required purpose and shall conform to the appropriate Eurocode/British Standards where such exists. Where references to the above are made it shall be inferred that the latest edition applies, together with subsequent amendments, unless otherwise specified.

9

Loading

9.1

Structural floors have been designed to carry the following uniformly distributed imposed loads in accordance with BS EN 1991-1

9.1

Dead Loading Allowance:

9.1.1

The superimposed Dead Loading does not include loading for structural elements including; slabs, beams, columns.

9.1.2

For superimposed dead loading refer to loading plans.

9.1.3

For cladding loads refer to loading plans.

9.2

Imposed Loading

9.2.1

For imposed loading on all levels refer to loading plans.

9.3

Wind loading for the purpose of global stability of the structure determined to BS EN 1991-1-4.

9.3.1

Wind fundamental basic wind velocity considered for Manchester is as per Figure NA.1 in NA to BS EN 1991-1-4.

9.4

Wind loading for the purpose of local effects on the building envelope to be determined by the contractor to BS EN 1991-1-4.

10

Builder's Work

10.1

Do not cut any holes or chases through any existing structural members without first obtaining the written consent of the Engineer.

10.2

Holes less than 250mm square are generally not shown on structural drawings. Refer to services engineer's / sub-Contractor's drawings.

10.3

Holes greater than 250mm square not shown on structural drawings must be agreed with the engineer.

10.4

New holes in slabs which have been cast already:

10.4.1

Holes less than 250mm wide are to be diamond cored.

10.4.2

Holes greater than 250mm wide will generally not be allowed.

10.4.3

No builder's work openings are to be cut without first obtaining agreement to proceed from the CA + Engineer.

10.5

Openings in beams and load bearing walls will generally not be allowed, unless agreed with the Engineer.

10.6

Infilling of openings around services to Architect's or services engineer's requirements. Where a load bearing infill is required this is to be designed by the Contractor. Details to be submitted to the CA for comment.

10.7

Concrete plinths are to be provided to act as bases for mechanical plant where required by services engineer. Dimensions of plinths are to suit the mechanical plant used. Drawings are to be submitted to the Structural Engineer for checking of plant weights on floors.

11

Health and Safety

11.1

Key construction health and safety hazards on this project are as follows:

Hazard	Action
Excavation generally	1. Surcharge loadings etc to be considered adjacent to all excavations by temporary works engineer. 2. Contractor to consider adequate angle of repose for excavations adjacent to adjoining building foundations and consider slenderness of structural systems and potential effect of their modification in the temporary condition. 3. Damage and contact with buried live services – the Contractor must identify all buried services at the site prior to commencing any excavation.
Potential for UXO's	If site was redeveloped in the late 1940's/50s hence there is a risk of UXO presence at the site within new excavations. The Contractor must allow for preliminary risk assessment and following actions to mitigate this site risk.

12

Items Outside of the Scope (Appointment) of the Structural Engineer

Responsibility for the following lies with other members of the design team:

- Setting out & dimensional responsibility

- Waterproofing

- Setting out & dimensional responsibility

- Fire protection

- Above ground drainage

- The role of principal designer

- Building regulations submissions

- Measurements of existing buildings or topographical surveys

- Redesign and value engineering

- Facade engineering

- Feature staircases and feature elements of architectural metalwork.

- External Works, including all external civil and Landscape build ups, paving, surfaces, and sub bases. Also includes concrete foundations and bases required for external works, fences, furniture or feature items.

- Fixings associated with ceilings and services Non-load bearing partitions

- Glazing design including framework and fixings back to primary structure, roof lights, balustrades, etc.

- Louvre design and fixings back to the primary structure

13

Contractor Designed Packages

The following is a list of Contractor Designed Portions that form part of the structural engineering package. This section is provided to highlight the general scope and is not intended to be an exhaustive list. Additional details and specification are provided within the contract drawings and specifications.

All CDP elements to have a minimum design life of 50 years.

Where applicable the contractor shall comply with the obligations of a "designer" under the Construction Design and Management Regulations and shall indemnify Eckersley O'Callaghan against any losses, damages, costs, claims, expenses or liabilities incurred in respect of any personal injury or death, or damage to property, real or personal, arising out of any Contractor Designed Portion.

In addition to any CDP items listed by the Architect, Project Manager or any other design team member, the Contractor shall assume and maintain design responsibility for the following elements:

13.1

Temporary Works and Sequencing of The Works:

All temporary works as outlined previously.

13.2

Preparation of RC Detail Drawings and Schedules

All reinforced concrete detailing work, including preparation of bending schedules, detail reinforcement drawings and any general arrangement drawings additional to those provided at tender stage is to be carried out by the Contractor. Confirmation of sizes and numbers/spacing of main bars and links will be provided post-tender by the Structural Engineer in line with a programme to be agreed with the Contractor.

13.3

Steel Connection Design

The contractor shall design and detail all steel-to-steel connections. Loads will be provided by EOC at construction for permanent loading. All steelwork connections shown on drawings are indicative only and design responsibility lies solely with the contractor.

13.4

Feature Staircases and Feature Elements of Architectural Steelwork

Design and detailing of all elements, brackets, fixings, etc. required to connect/support the stairs back to the primary structural elements detailed on the structural and Architectural drawings. Reactions forces are to be provided to EOC for incorporation and completion of the structural design.

This includes but is not limited to:

- Steel stairs

- Precast concrete stairs

- Balustrades in stair core

- Balustrades to roof and terraces

13.5

Pile Design

Design and detailing of piled foundations / retaining walls / guide wall / piling mat for both the temporary and permanent condition. Reaction forces onto primary structure to be provided for completion of structural design/detailing of the permanent works. The contractor is responsible for determining any temporary loading requirements from heave, construction loading, temporary propping etc.

13.6

Below Ground Waterproofing Design

We will assist the design team in identifying a strategy and incorporating this into the basement proposals. Where EOC have indicated any form of waterproofing on drawings or specification it is for information only Final design details will be the responsibility of the Contractor.

A grade 3 environment to BS8102:2009 is required around the entire buried structure.

Design and detailing all aspects of the systems including concrete joint positioning, detailing and treatment, batching processes, pouring processes, concrete additives, external/internal tanking and cavity drain detailing and associated pumping systems.

EOC have based the reinforcement estimates for waterproof concrete elements on a crack width limit of 0.2 mm

13.7

Secondary Structure, Stonework, Cladding & its Support

Any secondary structure required by the Contractor or any Sub-Contractor to support/restrain their system that is not shown on the Structural Engineer's drawings at tender stage is to be included for in the Contractor's price and programme.

Including all framing, supports and connections to the following elements:

- Builders work/supports to services and internal riser walls

- Sliding/folding screens

- Architectural metalwork

- Wind posts and glazing framework

- Structural metal framing systems

- Riser grating

- Additional support steel for cladding

- Plinths/hangers for plant

- Restraint/fixings for glazing/windows/doors

- Support for gutters

13.8

Pavement Reinstatement

The reinstatement of the pavements outside the site are to be reinstated to a standard that is acceptable to the Client, Architect and local authorities on completion of the works and meet the requirements of the relevant British Standards.

13.9

Contamination

Should contaminated soil or asbestos be discovered during works on site the Contractor shall:

Evaluate contamination levels in the building fabric, ground or groundwater in accordance with the relevant guidelines and regulations

Devise and maintain safe working practices for site operatives and visitors.

Establish a regime for disposal of spoil and waste from site (including WAC testing and liaison with disposal site as required).

Develop a remediation strategy for the site in accordance with relevant guidelines, regulations as well as national and local authority requirements and advice.

All costs associated with the above (including any testing required) must be included with programme requirements.

T01

31.05.23

KJ

AC

Stage 4 – For Stage approval

Rev

Date

By

Chkd

Description

Eckersley O'Callaghan

London Office 9th Floor, 236 Gray's Inn Rd, London WC1X 8HB +44 (0) 20 7354 5402 ecengineers.com

Project Title

325 Deansgate

General Notes Sheet 1 of 2

Project No

22244

Scale

NTS

Drawn By

KJ

Date

May 23

Drawing Suitability

S4 - Suitable for Stage Approval

Version

Drawing

DEA-EOC-XX-XX-DR-S-0001

Revision

T01

- 1

Foundations
- 1.1

Existing Obstructions
- 1.1.1

All existing foundations and underground obstructions within the foundation areas are to be removed to avoid hardspots developing under the new works. Live services are to be identified, protected, redirected or terminated as required.
- 1.1.2

All foundation drawings to be read in conjunction with the Site Investigation Report ref GeoCon Site Investigations Ltd, GSI 1813 HH Cl Report V1
- 1.1.3

All external works, landscaping, paving etc. are to the Architect's details.
- 1.2

Piled Foundations:
- 1.2.1

The selection of pile type, design and installation will be the responsibility of the piling sub-Contractor subject to the following:
- 1.2.2

Piles are to be designed to carry the working loads indicated in the piling table.
- 1.2.3

Piles are to be cast to a level minimum 300 above the trimmed cut-off level shown on the piling schedule.

- 2

Underpinning
- 2.1

Before starting the work the Contractor is to check for any services that could be damaged by the underpinning work, and shall be responsible for ensuring that their operations do not in any way impair the safety or condition of the building, both before and during the execution of the work. They should immediately inform the Engineer if they consider that more stringent procedures than those specified are necessary.
- 2.2

If a linear length of wall has been proposed for underpinning, each pin should be numbered as follows 1, 3, 5, 2, 4, 1, 3 etc so that no adjacent underpins are carried out sequentially. All sections marked 1 to be excavated, cast and dry-packed before starting excavation of sections marked 2, etc.
- 2.3

Underpinning is to be carried out in short sections of about 1.0m in length to the widths shown unless otherwise agreed with the Engineer, and to the satisfaction of the Engineer and the Building Inspector. Projecting portions of the existing footings are to be carefully cut off via 'non-percussive' means, where directed and the underside of the footings are to be cleaned and hacked free of dirt, soil or loose materials before underpinning. The sides of the previous underpinning bays are to be dowelled and / or roughened / keyed to the satisfaction of the Engineer.
- 2.4

The concrete is to be stopped off nominally 75mm below the underside of the existing wall / footing, and the final pinning over the whole width of the wall / footing is to be carried out with 1:3 mix cement to sharp sand dry-pack mortar, well-rammed in 24 hours after the mass concrete has been poured. Excavation to any section of underpinning shall not be started until at least 48 hours after completion of any adjacent sections, and excavation and concreting of any section of underpinning should be carried out on the same day.
- 2.5

The Contractor is to keep a record of the sequence and dimensions of the under-pinning actually completed, including details of excavation, casting concrete and dry packing for each section.

- 3

Concrete
- 3.1

Concrete to be in accordance with the specification BS EN 1992-1-1:2004, BS 8500: Part 2 and BS EN 206.
- 3.2

Grade & Cover

Concrete element	Grade	Cover (exposed to ground water or weather) (mm)	Cover (not exposed to ground water or weather) (mm)
Blinding	GEN 1	N/A	N/A
Core walls	RC 50/60	N/A	35
Metal deck slab	RC 30/37	N/A	25
Retaining liner walls	RC 32/40	50	35
Raft	RC 32/40	50	35
Underpinning	C20 (mass concrete)	N/A	N/A
Plain smooth finish to all structural concrete Tops of ground beams and floor slabs are to be uniformly levelled and tamped to type 1U finish.			

- 3.3

Generally refer to the National Structural Concrete Specification (NSCS) for pour sizes, dimensional tolerance etc.
- 3.4

Do not place concrete when ambient air temperature is less than 5°C or greater than 30°C.
- 3.5

All holes shall be formed and all inserts cast in at the time of pouring concrete. No part of the concrete works shall be drilled or cut away without the approval of the Structural Engineer.
- 3.6

Reinforcement shall be fixed adequately using tying wire or steel clips. Concrete cover is to be as specified on the drawings. Chairs and spacers are to be provided as necessary to maintain the specified cover.
- 3.7

Laps to designed to meet the requirements of BS EN 1992-1-1:2004, taking into account the bar diameter, bond condition and percentage of bars lapped.
- 3.8

All reinforcement grade 500B deformed bars UNO
- 3.9

Reinforcement to be sourced from companies holding valid certificates of approval for products conformity issued by the UK Certification Authority for Reinforcing Steels (CARES).
- 3.10

Reinforcement Estimates

Element	kg/m ³	Element	kg/m ³
Piles	By piling Contractor	Core walls	145
Raft/Core Pilecap	175	Stair landings	140
Retaining walls/Water Tank walls	150	Composite slabs	90

- 4

Steel
- 4.1

All steelwork to be grade S355 UNO to BS EN 10025-2 and BS EN 1993-1-1:2005. All Hollow sections (RHS / SHS / CHS / OHS) are to be "Celsius 355" sections by TATA or equivalently graded to BS EN 10210-1.
- 4.2

The steelwork fabricator shall produce and submit electronic dimensioned fabrication drawings to the Engineer.
- 4.3

The fabricator is to complete the design, draw detailed drawings and provide calculations for all connections, using design connection forces given by the Engineer. All steelwork connections to steel or concrete are to be Contractor designed. All steelwork connection reactions and moments are indicated in kN and kNm respectively and are ULS figures. All shear connections are to be designed for a minimum reaction of 75kN UNO.
- 4.4

An additional tie force of 75kN, or 70% of ULS shear force reaction, whichever is greater, must be allowed for all connections, UNO.
- 4.5

All bolts are to be grade 8.8 sherardized to BS 7371-8:2011, class 1. All bolts, nuts and washers are to be to BS EN 1993-1-1:2005. Washers are to be placed beneath the rotated item. All welds to be minimum 6mm leg length continuous fillet welds unless specifically noted otherwise.
- 4.6

All welds are to be a minimum of 6mm fillet welds or full-strength butt welds UNO on the drawings. Site welding shall not be permitted except with the written approval of the Engineer. All site welds to be tested in accordance with National Structural Steelwork Specification. The Contractor must provide details of the 'Responsible Welding Coordinator' and submit a 'Weld Procedure Specification' for each structural weld including suitable welding qualifications for the specific including pre-heating requirements if necessary.
- 4.7

Corrosion classification:

Condition	Class	Notes	Life	System Ref.
Not Visible in finished building	C1	No corrosion protection required.	-	I-1
In controlled or air-conditioned space, e.g. offices or retail.		Provide primer to deal with temporary condition.		
Visible in finished building	C1	Primer, Finish	50	I-2
Semi-External	C2	Primer only	50	I-3
Steelwork in cavity walls outside of the vapour barrier.				
Internal Visible – Semi-controlled	C2	Primer only. Consider galvanising.	15-20	I-4
Semi-controlled environment: Plant room, dry warehouse, roof voids (where occasional condensation may occur)				
Internal Visible – Uncontrolled	C3	Primer, intermediate, finish	15-20	I-5
Uncontrolled environment that is frequently damp or wet: swimming pools, kitchens, laundries, etc.				
Possibly plant rooms				
External Visibly exposed:				
Rural	C2	Primer, intermediate, finish	25	E-1
Urban/ Industrial	C3/4		15-20	
Coastal/ desert	C5		15-20	
No architectural requirements (Whether visible or not)				Galv

Notes:
- Life corresponds to anticipated life to first maintenance.
- Class corresponds to environmental class in accordance with BS EN ISO 12944-2.

- 5

Proprietary Metal Decking:
- 5.1

All proprietary metal decking designed to span compositely with in situ concrete shall be fixed and trimmed in accordance with the manufacturer's recommendations and details.
- 5.2

The Contractor shall produce and submit dimensioned layout drawings of the decking for the Engineer to comment upon.
- 5.3

All metal decking requires reinforcement as detailed on the drawings. The Contractor is not to exceed a construction loading in accordance with the manufacturer's recommendations.

- 6

Below Ground Drainage
- 6.1

Drains are to be 100mm nominal diameter laid at a gradient not flatter than 1/100 for surface water, and 1/80 for foul water, unless shown otherwise.
- 6.2

Foul drains without at least one WC connected are to be laid not flatter than 1/40. For 100 dia. pipe where 10 or more properties are served the foul drain should be 150 dia. laid not flatter than 1/150.
- 6.3

Drains are to be constructed using vitrified clay pipes to BS65 or UPVC pipes to BS4650, all with flexible joints, bedded and backfilled in accordance with the manufacturer's recommendations and BS EN 752:2017. See EOC general details of private drainage works (either the UPVC or clayware drawings depending on which material the Contractor considers most economic for the project).
- 6.4

Flexible pipes with less than 600mm cover are to be surrounded with concrete, or to have concrete paving slabs laid as bridging above the pipe.

- 6.5

Inspection chambers access points to be provided unless noted otherwise. Access to drains may be provided by vitrified clay, grp or polypropylene inspection chambers to BS EN 13598-1:2010 and BS EN 13598-2:2009.
- 6.5.1

Manholes to be provided at combination of foul and surface water runs. Construction to be:
- Class B engineering bricks to BS3921,
- Precast concrete sections to BS5911
- 6.6

Manholes to be surrounded with 150mm of ST1 concrete. Minimum dimensions to conform BS EN 752:2017. See EOC general drainage detail drawings.
- 6.7

Covers and frames for manholes/inspection chambers must comply with BS EN 124, Class D400 for vehicular access & B125 for footpaths, verges and soft landscaping.
- 6.8

A ventilating drain should be provided at, or near the head of each main drain run, any branch longer than 6m serving a single appliance or 12m serving a group of appliances.
- 6.9

Elsewhere, discharge stacks may be terminated with air admittance valves ventilated in the roof space.
- 6.10

Gullies, rainwater pipes and SVP's should be provided with roddable access at base.
- 6.11

All pipe soffits level unless noted otherwise.
- 6.12

Long radius bends to be used at the base of all soil stacks.
- 6.13

All cover levels are approximate only.
- 6.14

Minimum depth of SVP's & SS's to be 450mm below FFL shown.
- 6.15

Private hardstanding area gullies to have frames to BS EN 124 Class C250.
- 6.16

Note: all UPVC chambers, gully pots and fittings to be surrounded in 150mm minimum ST1 concrete. Heavy duty covers & frames to be supported on a concrete nib within the surround. See private drainage details drawing.

General Notes		
1.	This drawing is to be reading conjunction with all relevant Architects & Engineers drawings & specifications.	
2.	The Contractor is to be responsible for all dimensions & for the correct setting out of the works on site.	
3.	Do not scale from this drawing	

T02	16.06.23	KJ	AC	Stage 4 – For Stage approval
T01	31.05.23	KJ	AC	Stage 4 – For Stage approval
Rev	Date	By	Chkd	Description

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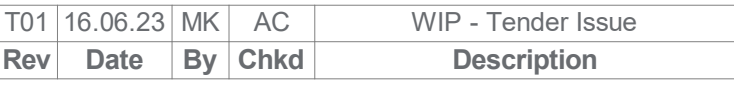
Project Title

325 Deansgate

General Notes Sheet 2 of 2

Project No	Scale
22244	NTS
Drawn By	Date
KJ	May 23
Drawing Suitability	Version
S4 - Suitable for Stage Approval	
Drawing	Revision
DEA-EOC-XX-XX-DR-S-0002	T02

1. This drawing is to be read in conjunction with all relevant Architects & Engineers drawings & specifications.



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Drawing Title
Site Constrains
Cross Section 02

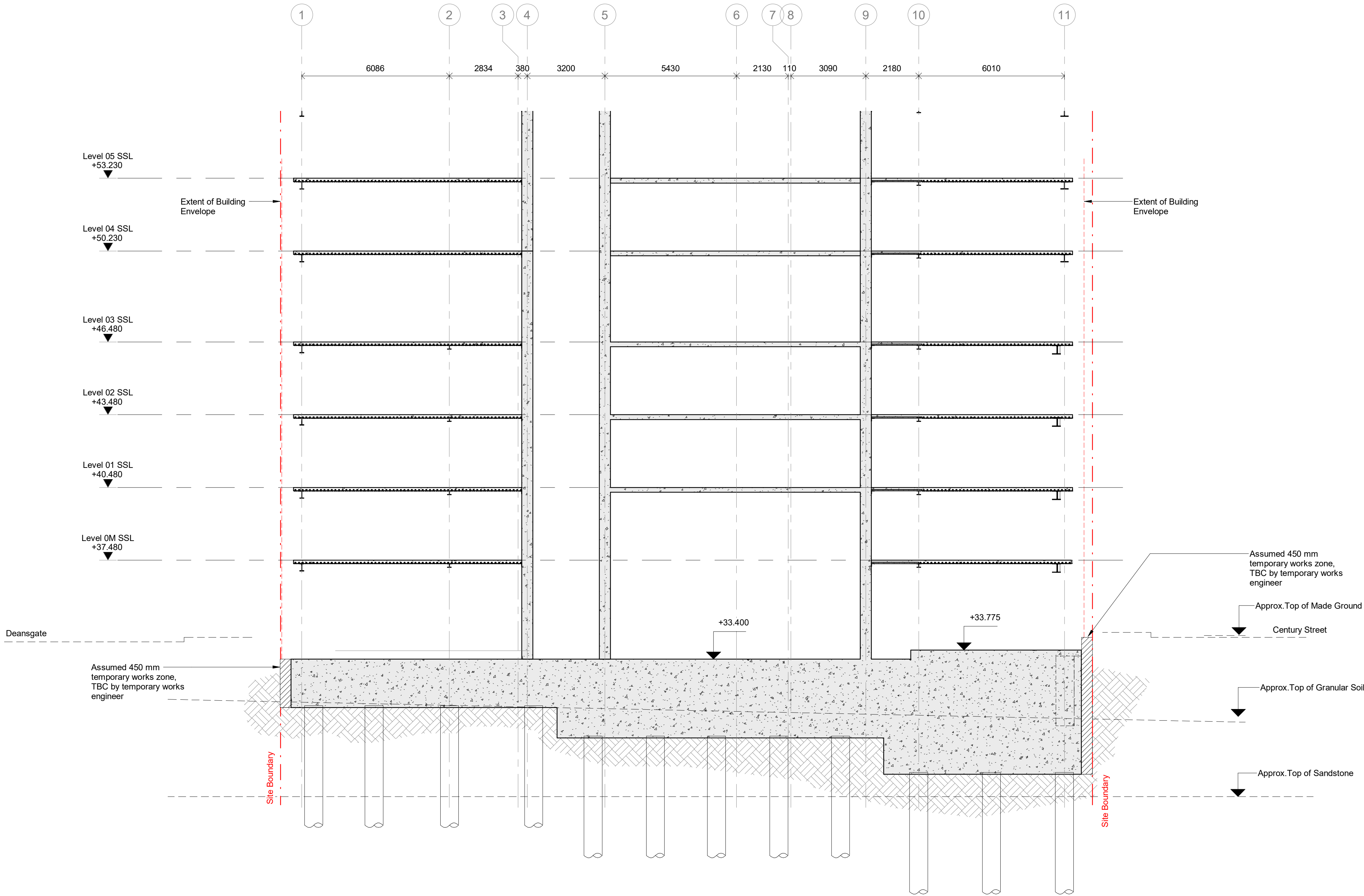
Drawing Number
DEA-EOC-XX-ZZ-DR-S-2501

Rev

T01

General Notes

1. This drawing is to be read in conjunction with all relevant Architects & Engineers drawings & specifications.
2. The Contractor is to be responsible for all dimensions & for the correct setting out of the works on site.
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T01	16.06.23	MK	AC	WIP - Tender Issue
Rev	Date	By	Chkd	Description

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Project Title
325 Deansgate

Drawing Title
Site Constrains
Cross Section 03

Project No
22244

Scale:
1 : 100 [A1]

Drawn By
MK

Date
May 2023

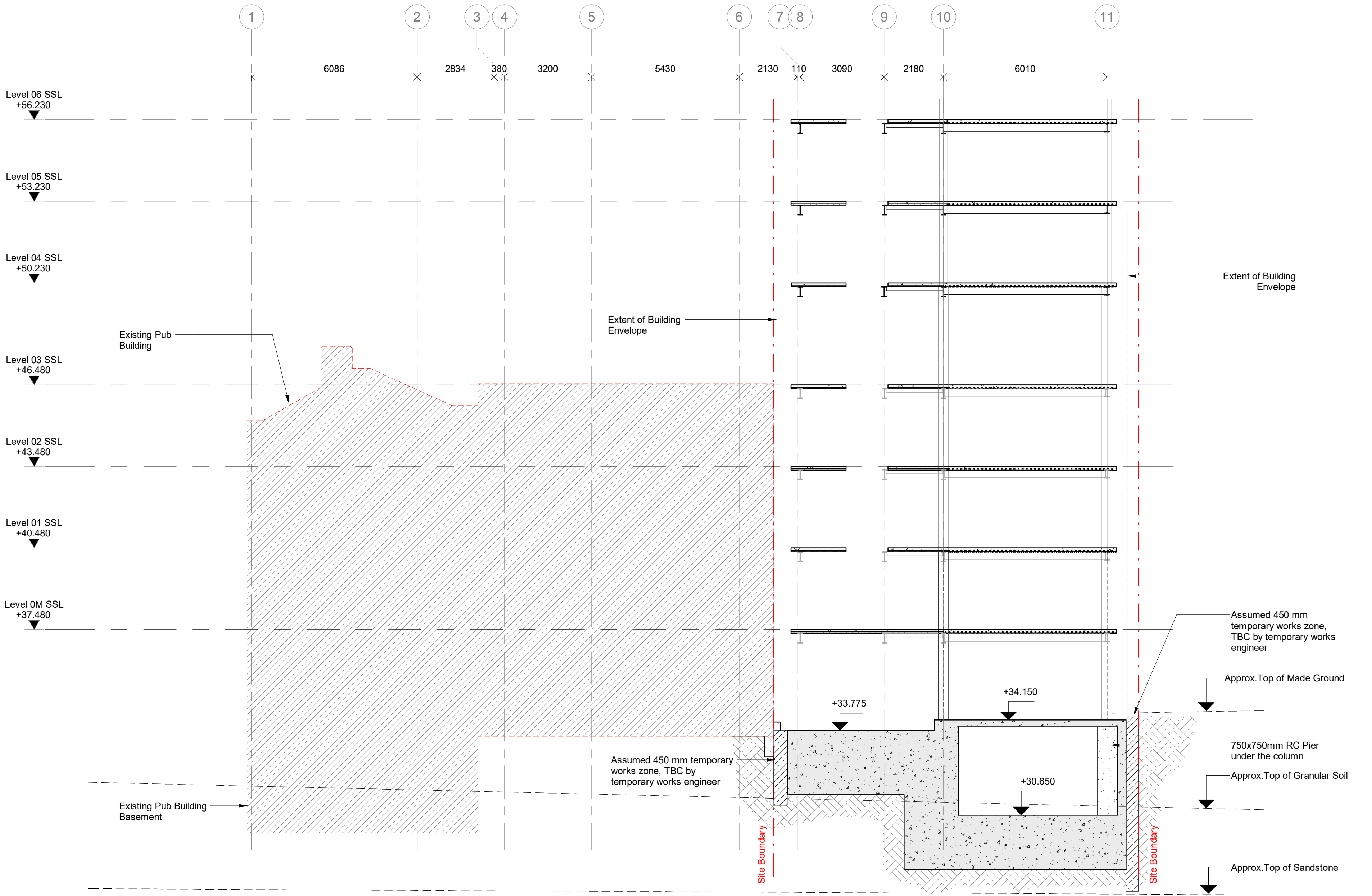
Drawing Suitability
S1 - Suitable for Coordination

Ver

Drawing Number
DEA-EOC-XX-ZZ-DR-S-2502

Rev
T01

- General Notes**
1. This drawing is to be read in conjunction with all relevant Architects & Engineers drawings & specifications.
 2. The Contractor is to be responsible for all dimensions & for the correct setting out of the works on site.
 3. Do not scale from this drawing.



T01	16.06.23	MK	AC	WIP - Tender Issue
Rev	Date	By	Chkd	Description

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Project Title
325 Deansgate

Drawing Title
Site Constrains
Cross Section 04

Project No
22244

Scale:
1 : 100 [A1]

Drawn By
MK

Date
May 2023

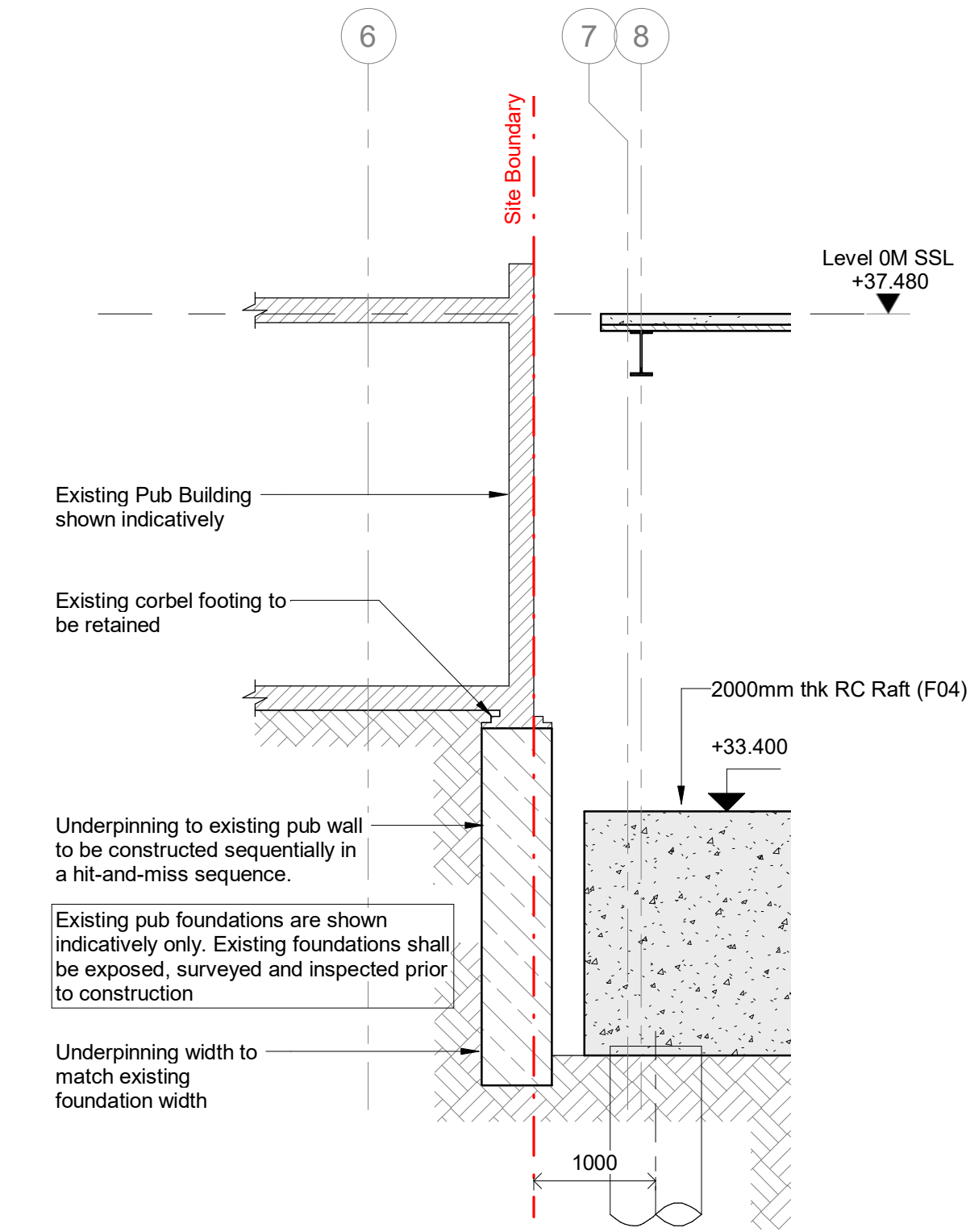
Drawing Suitability
S1 - Suitable for Coordination

Ver

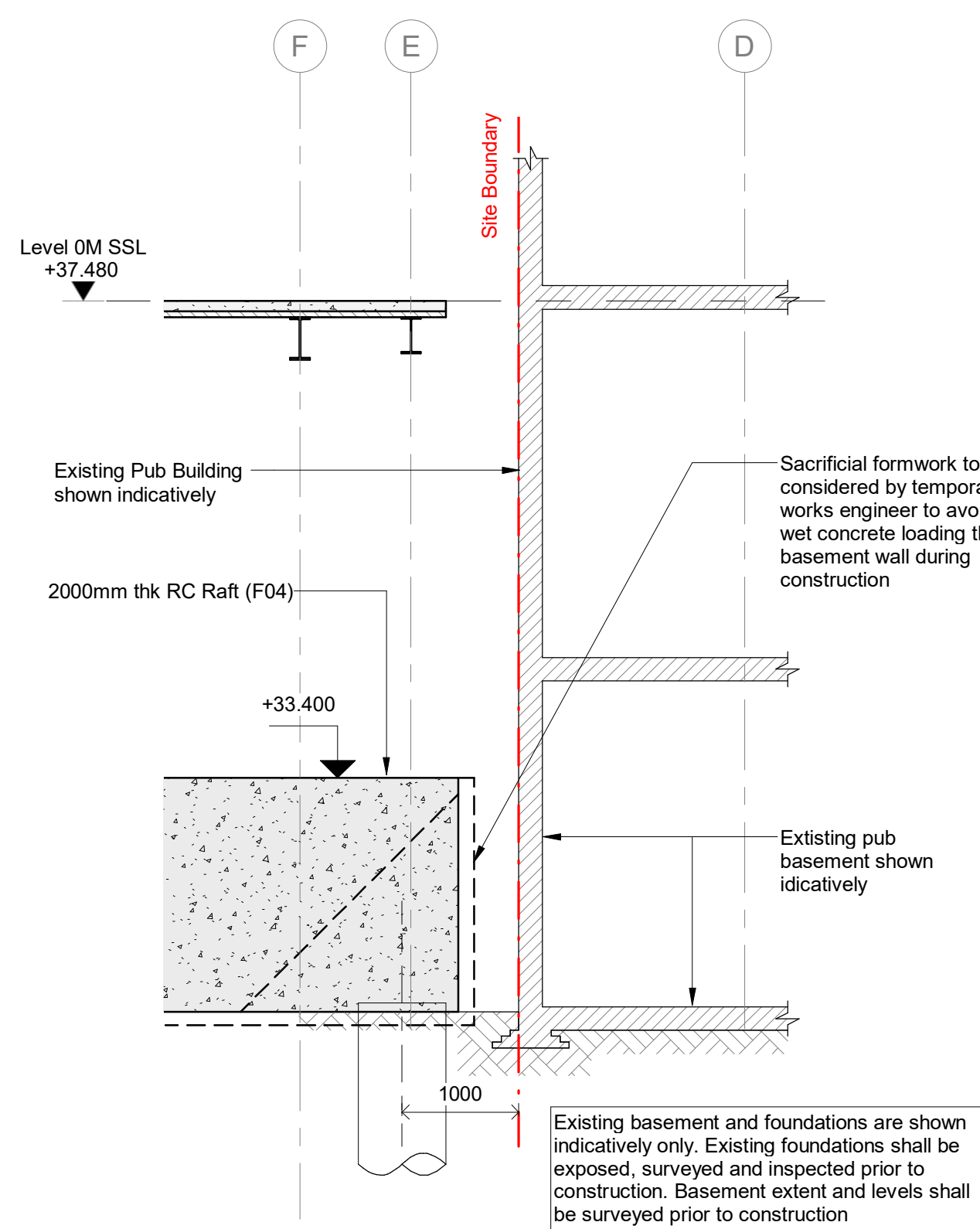
Drawing Number
DEA-EOC-XX-ZZ-DR-S-2503

Rev
T01

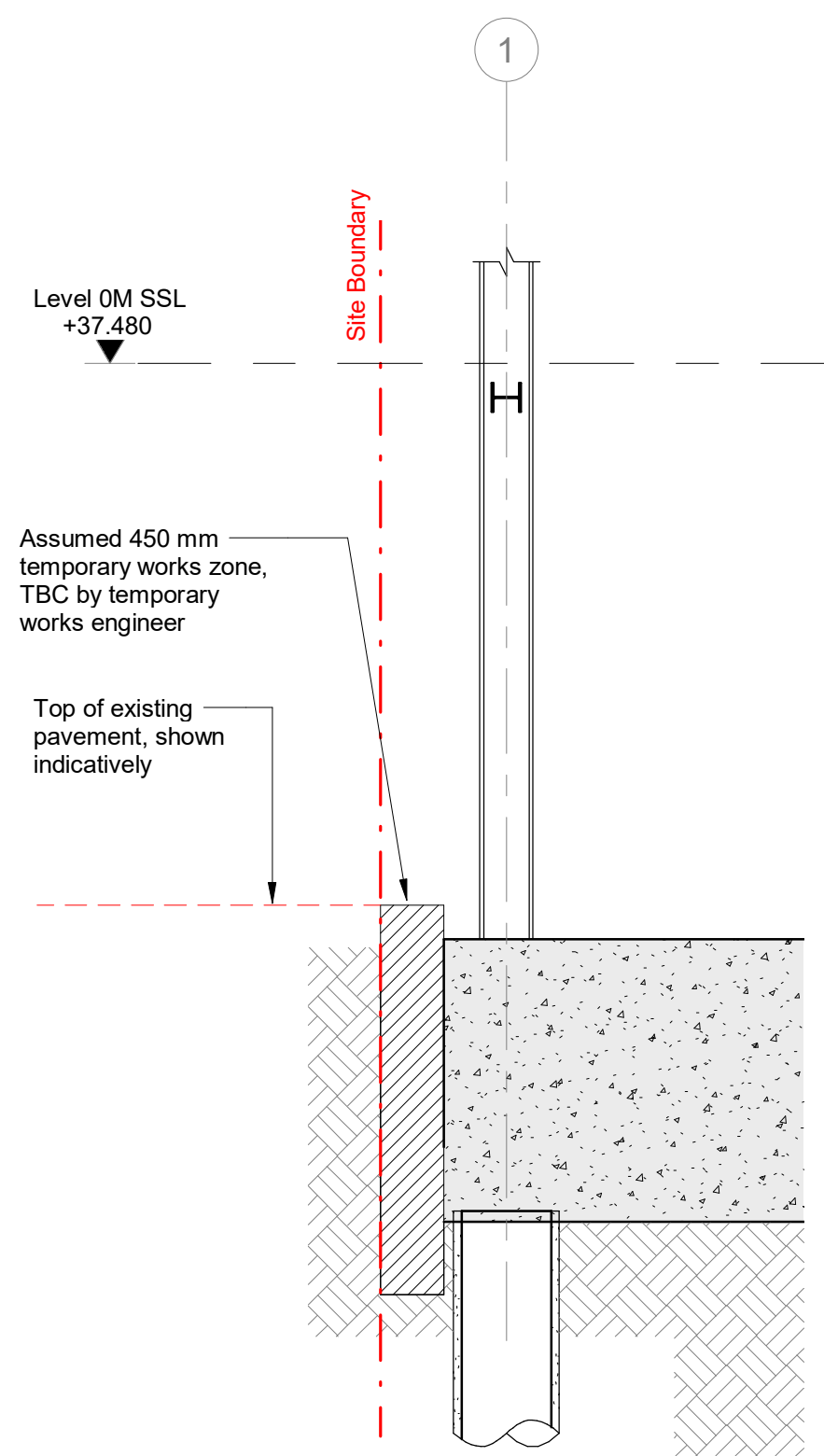
- General Notes**
1. This drawing is to be read in conjunction with all relevant Architects & Engineers drawings & specifications.
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 3. Do not scale from this drawing.



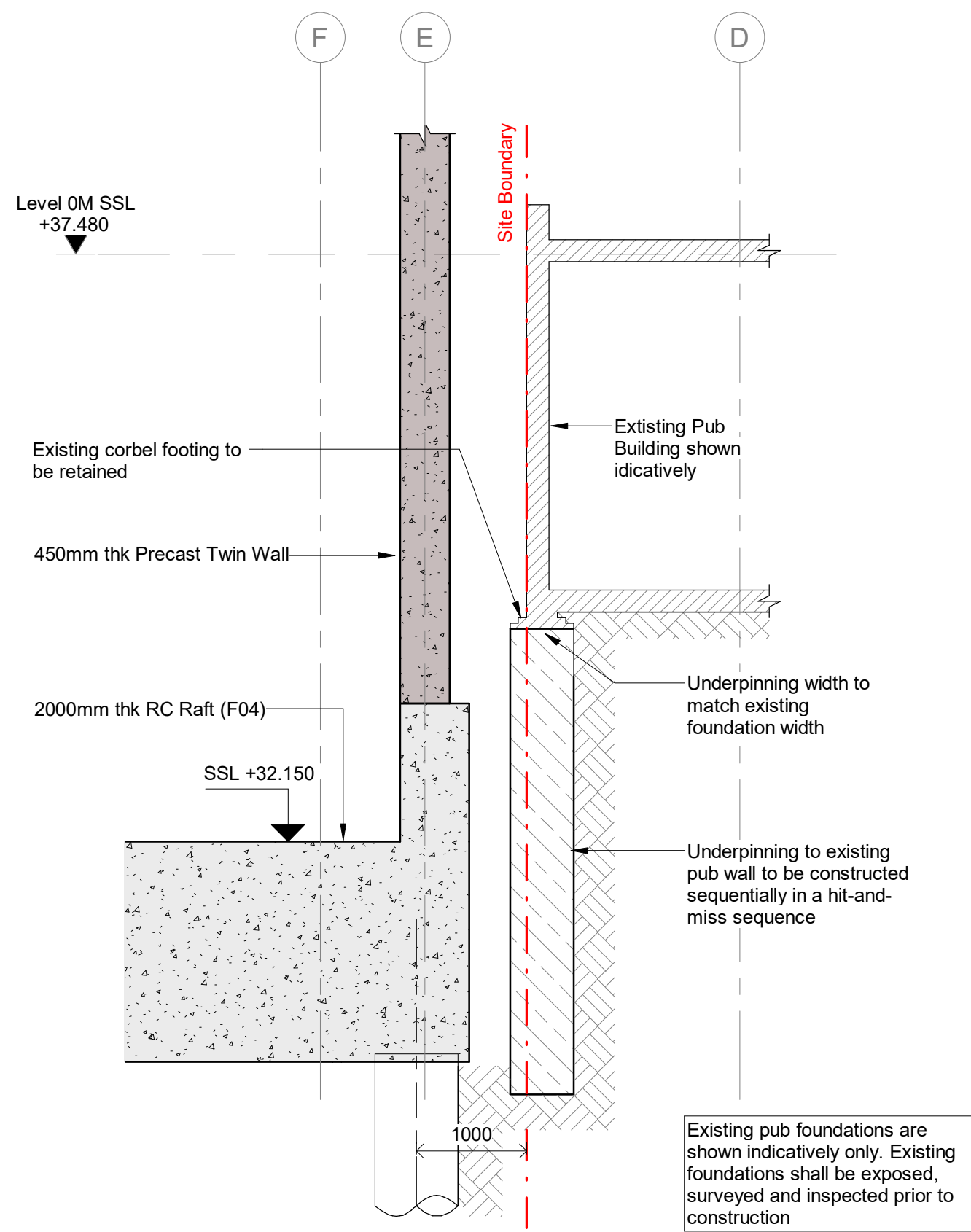
01 Boundary Section
1 : 50



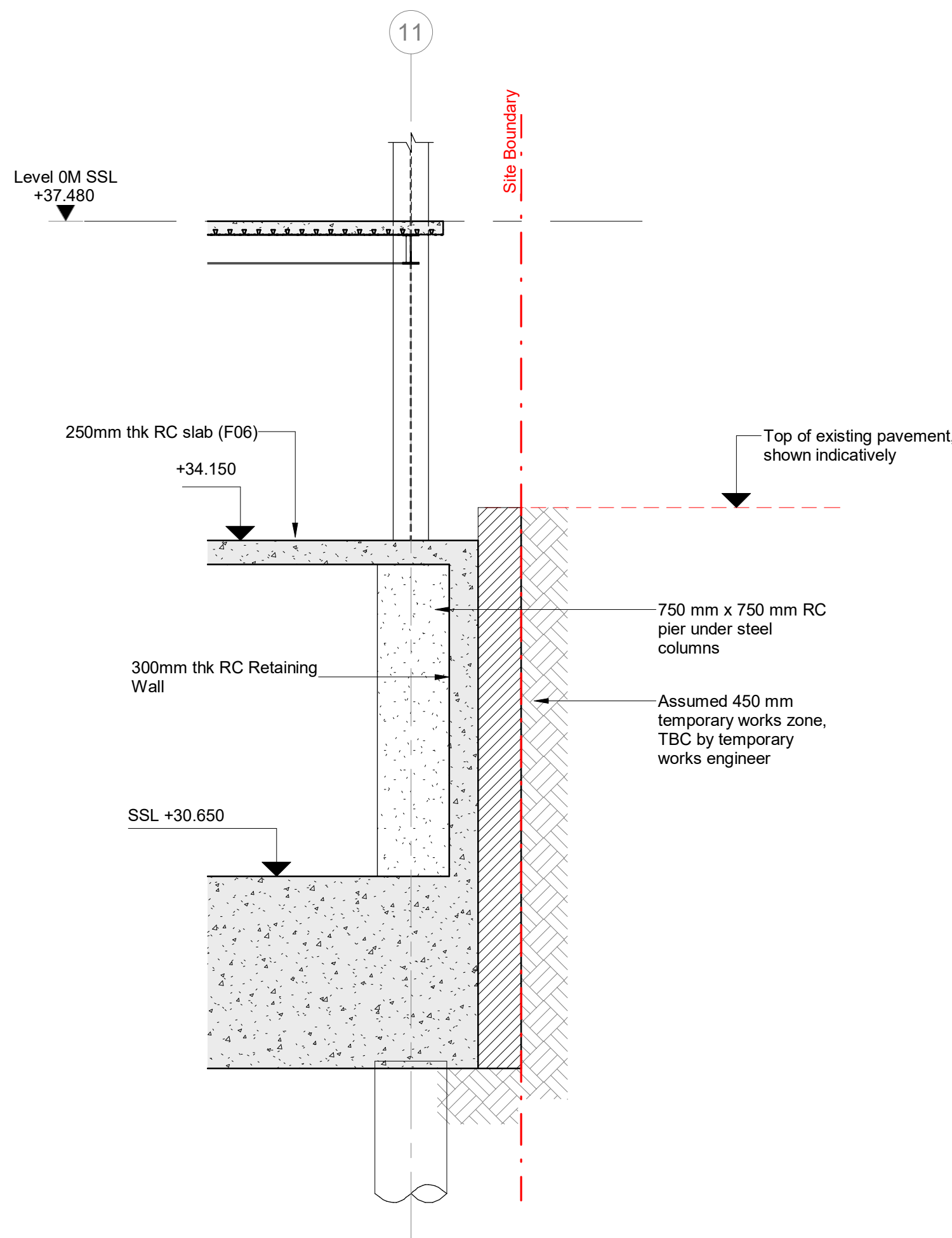
02 Boundary Section
1 : 50



03 Boundary Section
1 : 50



04 Boundary Section
1 : 50



05 Boundary Section
1 : 50

T01	16.06.23	MK	AC	WIP - Tender Issue
Rev	Date	By	Chkd	Description

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Project Title
325 Deansgate

Drawing Title
Boundary Sections Sheet 1

Project No
22244

Scale:
1 : 50 [A1]

Drawn By
TJ/MK

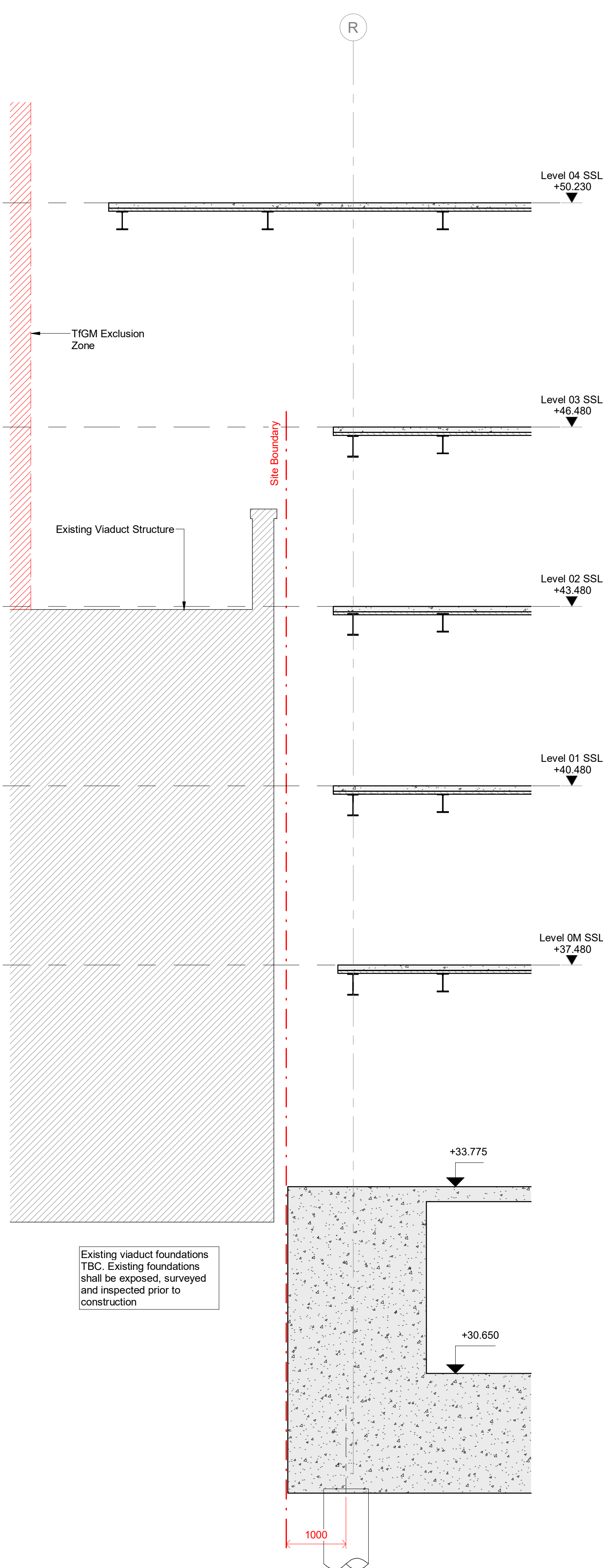
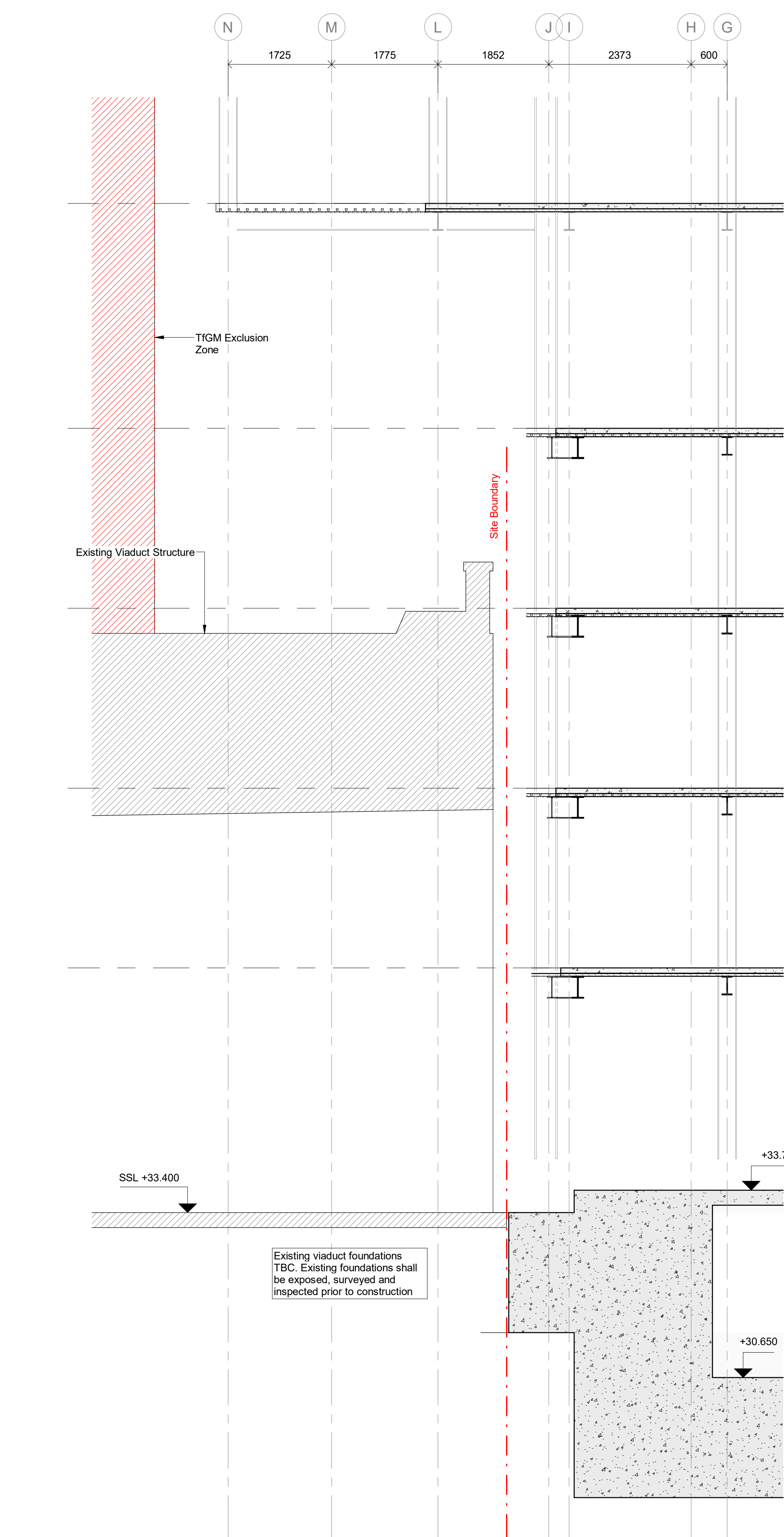
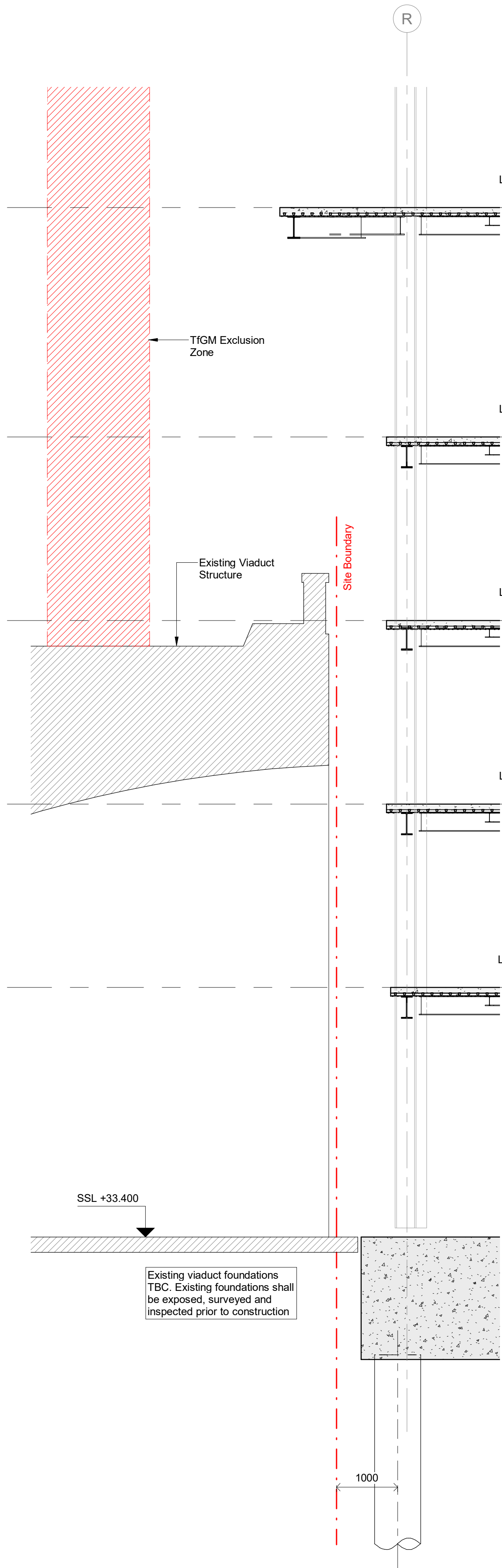
Date

Drawing Suitability
S1 - Suitable for Coordination

Ver

Drawing Number
DEA-EOC-XX-ZZ-DR-S-2510

Rev
T01



- General Notes**
1. This drawing is to be read in conjunction with all relevant Architects & Engineers drawings & specifications.
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T01	16.06.23	MK	AC	WIP - Tender Issue
Rev	Date	By	Chkd	Description

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Project Title
325 Deansgate

Drawing Title
Boundary Sections Sheet 2

Project No
22244

Scale:
1 : 50 [A1]

Drawn By
TJ

Date

Drawing Suitability
S1 - Suitable for Coordination

Ver

Drawing Number
DEA-EOC-XX-ZZ-DR-S-2511

Rev
T01

01 Boundary Section

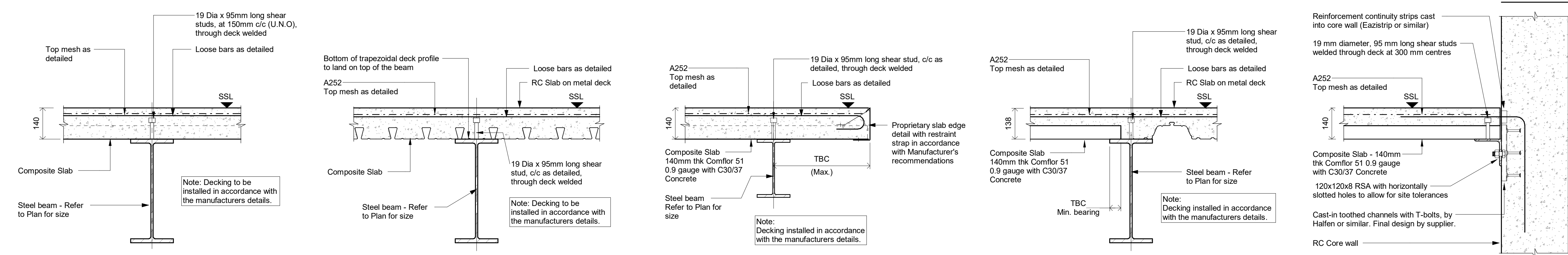
1 : 50

02 Boundary Section

1 : 50

03 Boundary Section

1 : 50

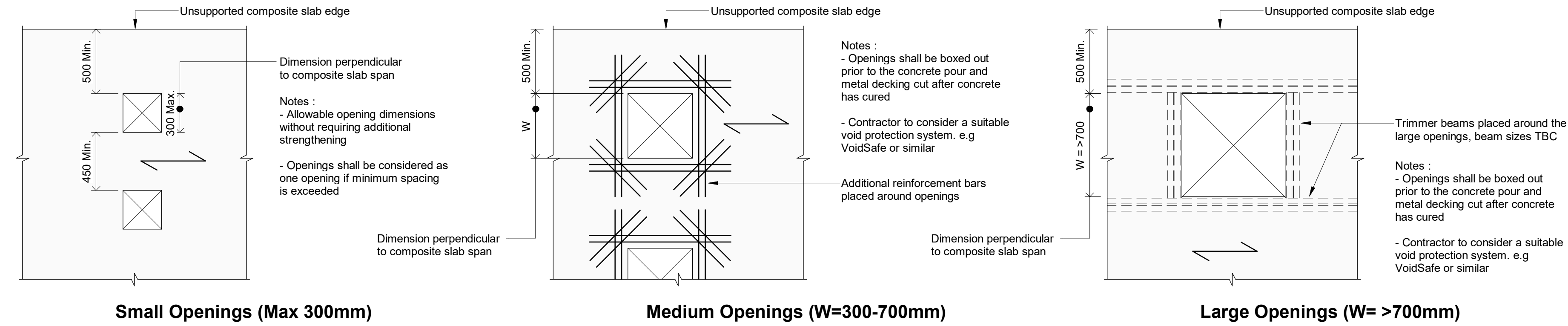


01 Composite Slab - Beam Connection Detail1 : 10

02 Composite Slab -Cantilever Edge Detail1 : 10

03 Composite Slab - Deck Transition1 : 10

04 Composite Slab - Deck Transition1 : 10



05 Typical Openings Through Composite Slab1 : 25

General Notes

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T01	31.05.23	MK	AC	WIP - Tender Issue	
Rev	Date	By	Chkd	Description	

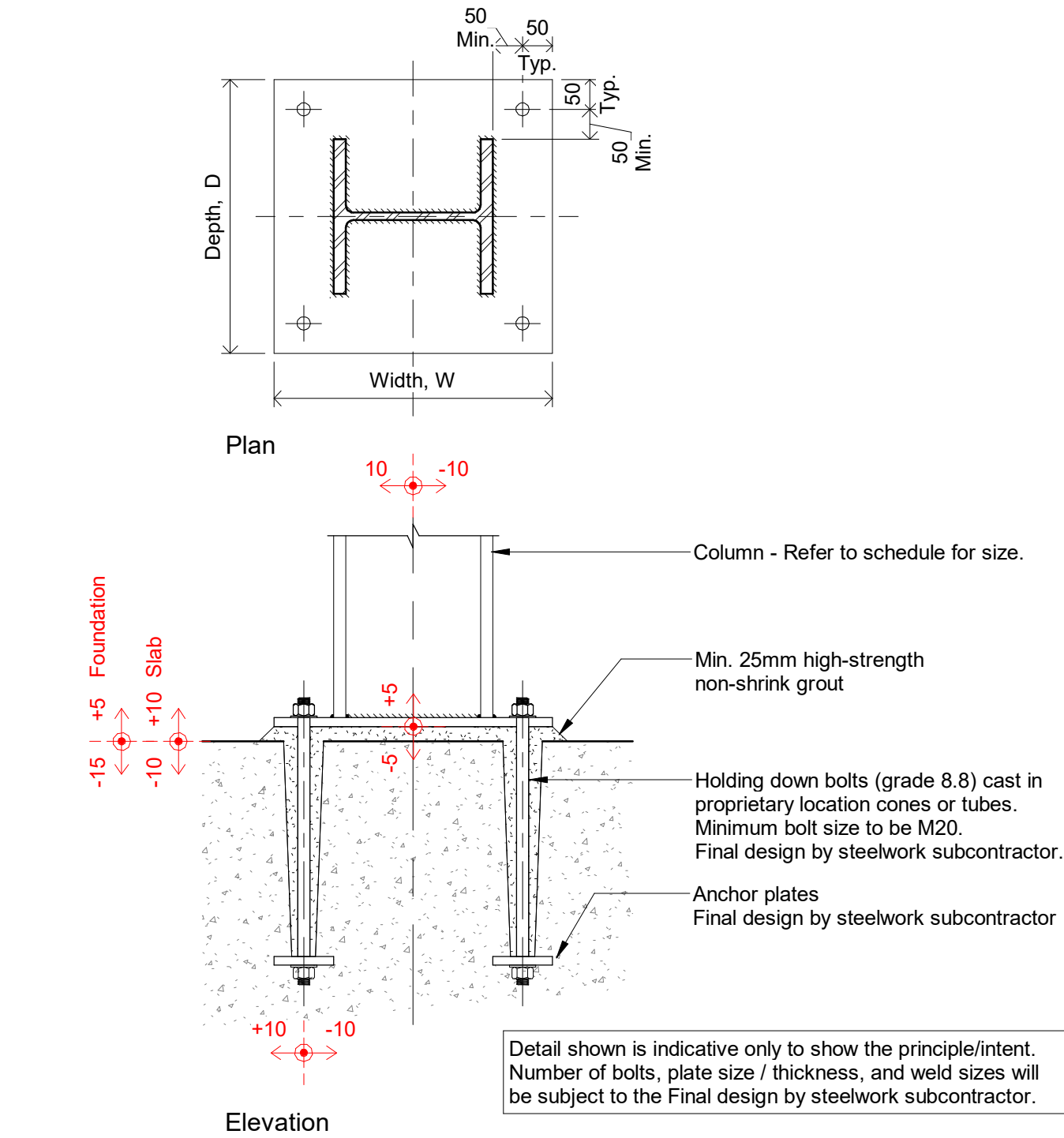
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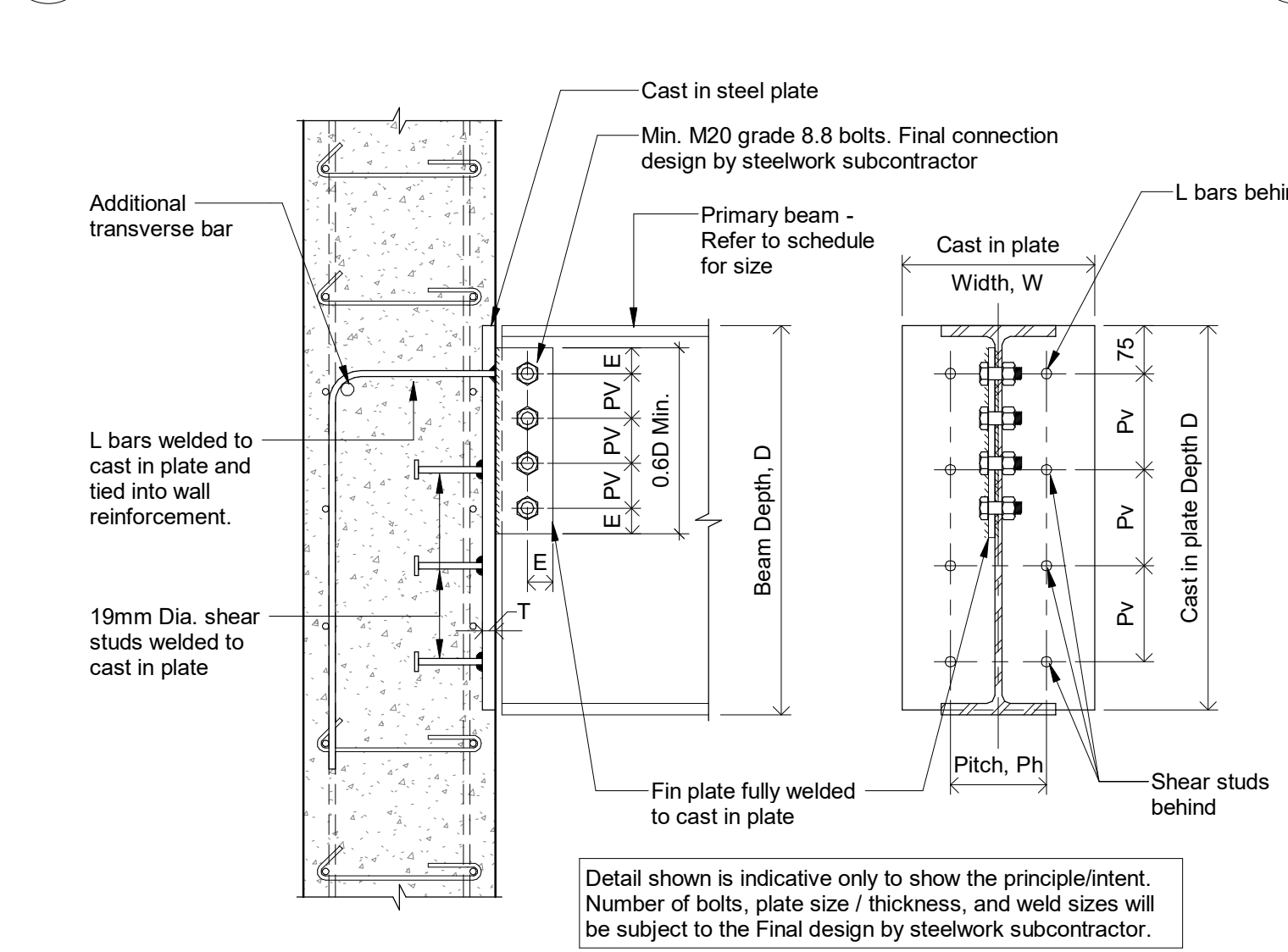
Project Title
325 Deansgate

Drawing Title
Typical Superstructure Details
Sheet 1

Project No 22244	Scale: As indicated [A1]
Drawn By MK/SP	Date February 2023
Drawing Suitability S0 - Initial Issue	Ver
Drawing Number DEA-EOC-XX-ZZ-DR-S-4950	Rev T01

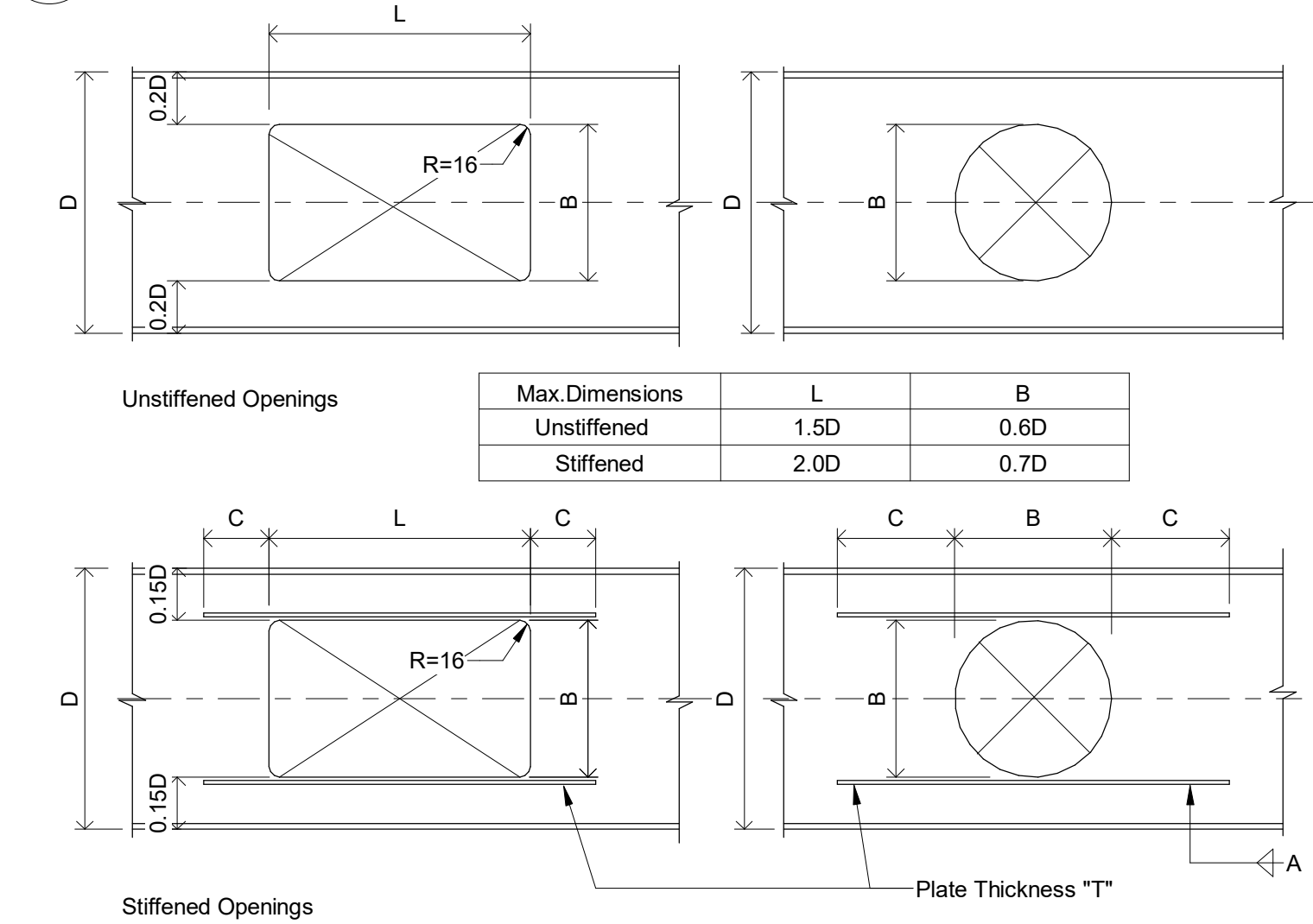


01 Column Baseplate Intent (Cast In Bolts)
1 : 10

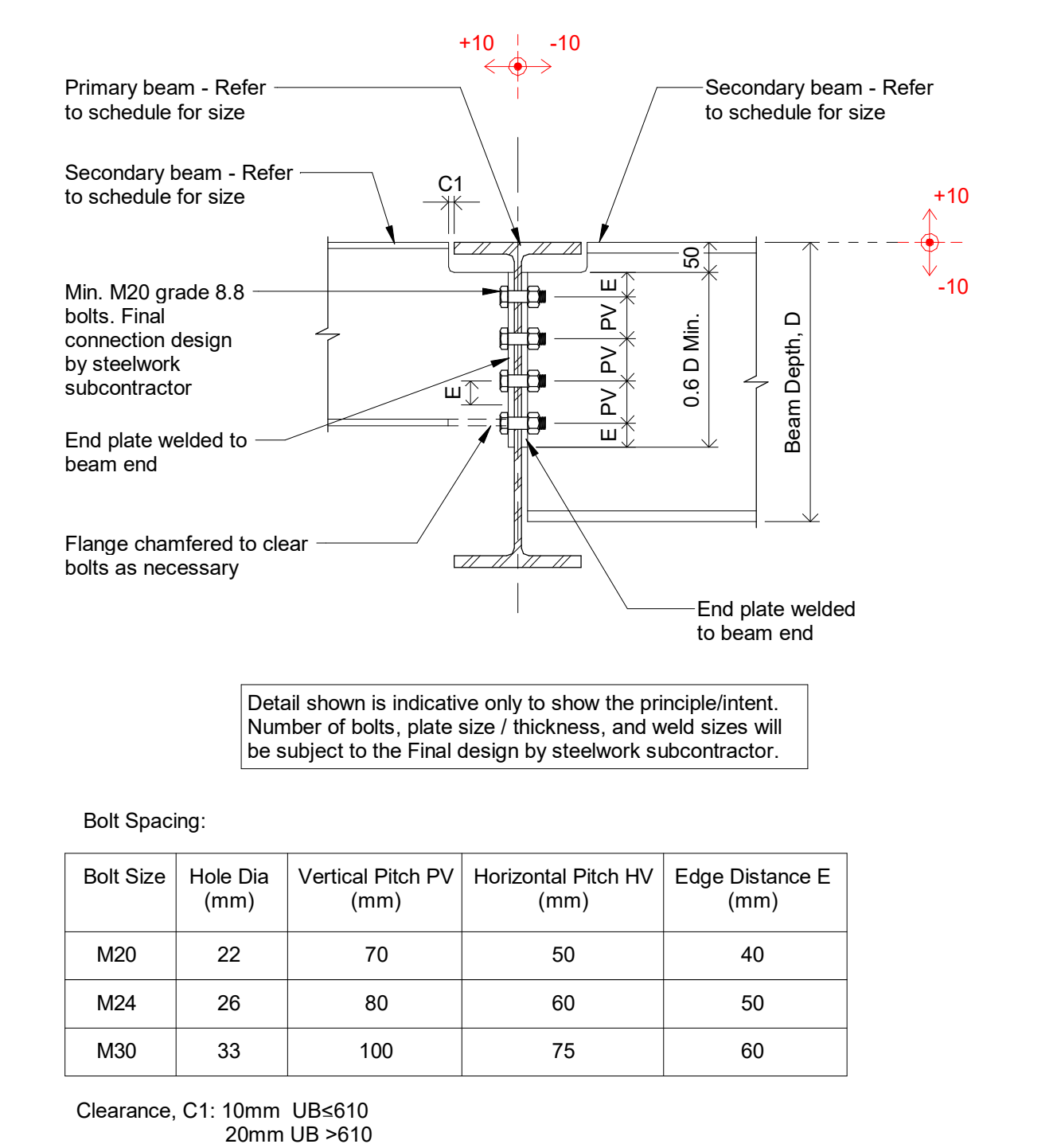


Cast in plate			Studs		Reinforcing Bars		
Depth D (mm)	Width W (mm)	Thickness T (mm)	Number	Pitch (mm) Pv Ph	Number	Size	Long Leg (mm)
TBC	TBC	TBC	TBC	TBC TBC	TBC	TBC	TBC

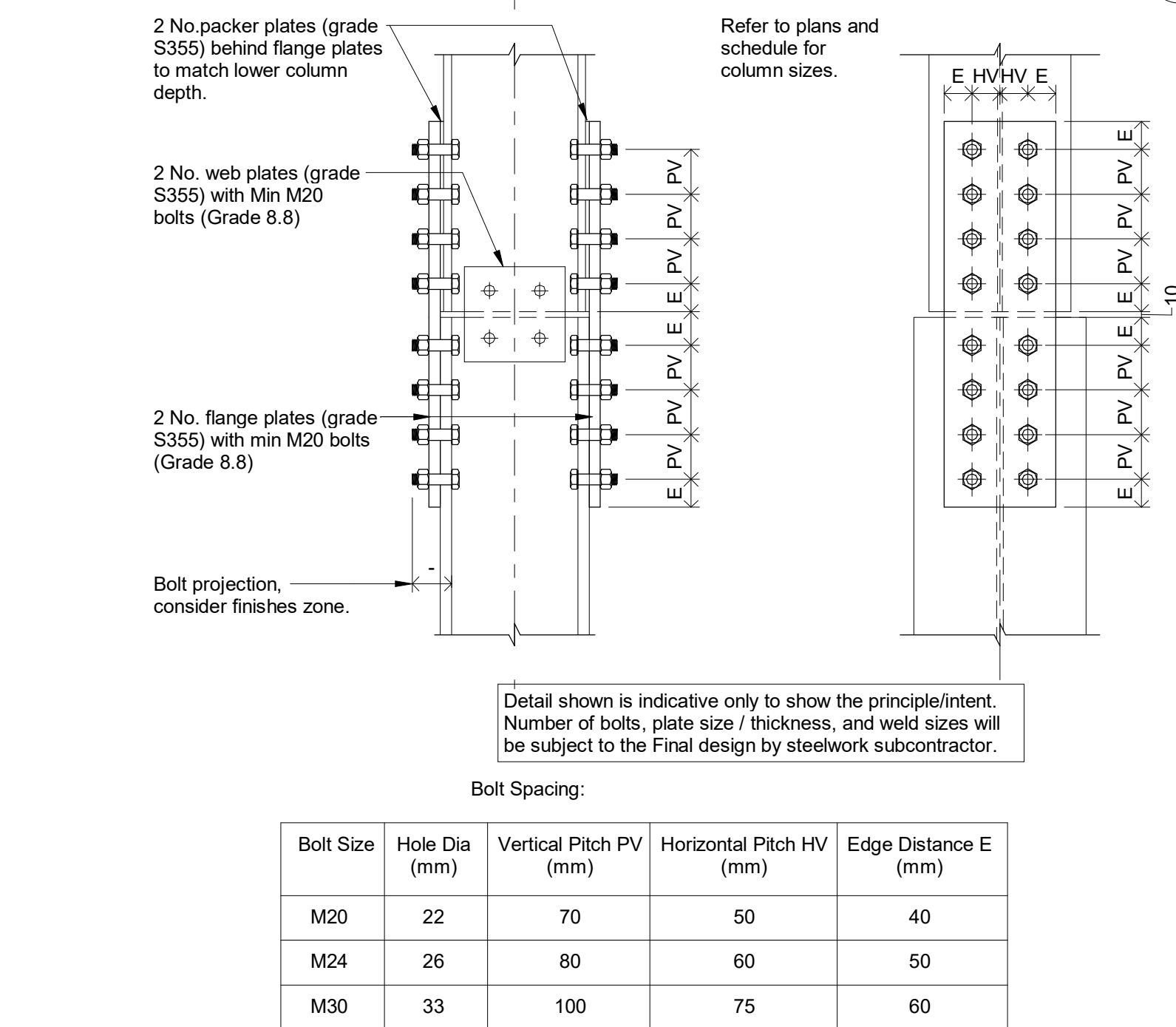
04 Typical Cast In Plate with Fin Plate Connection Intent
1 : 10



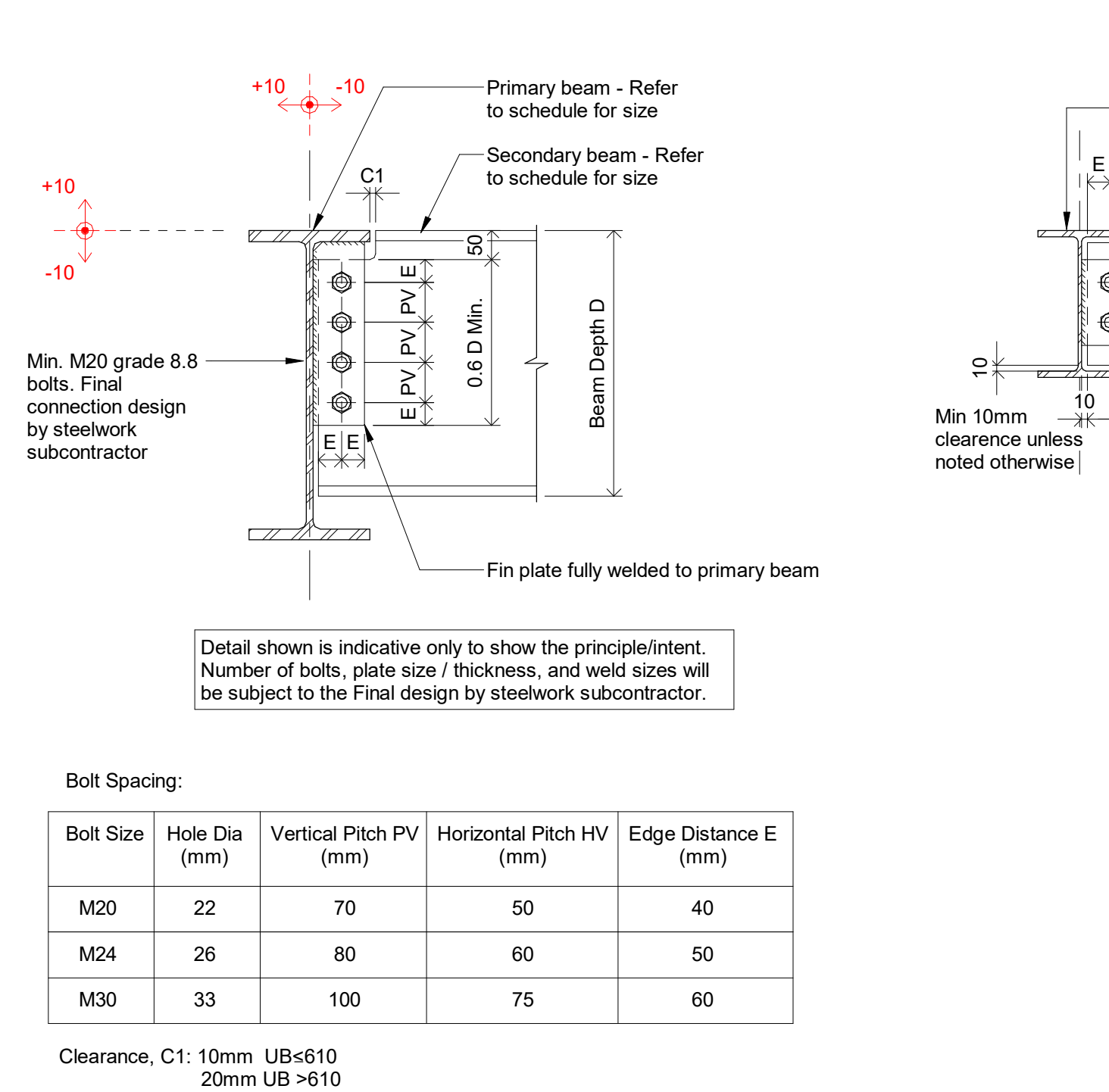
07 Typical Beam Penetrations - Simply Supported Beams
1 : 10



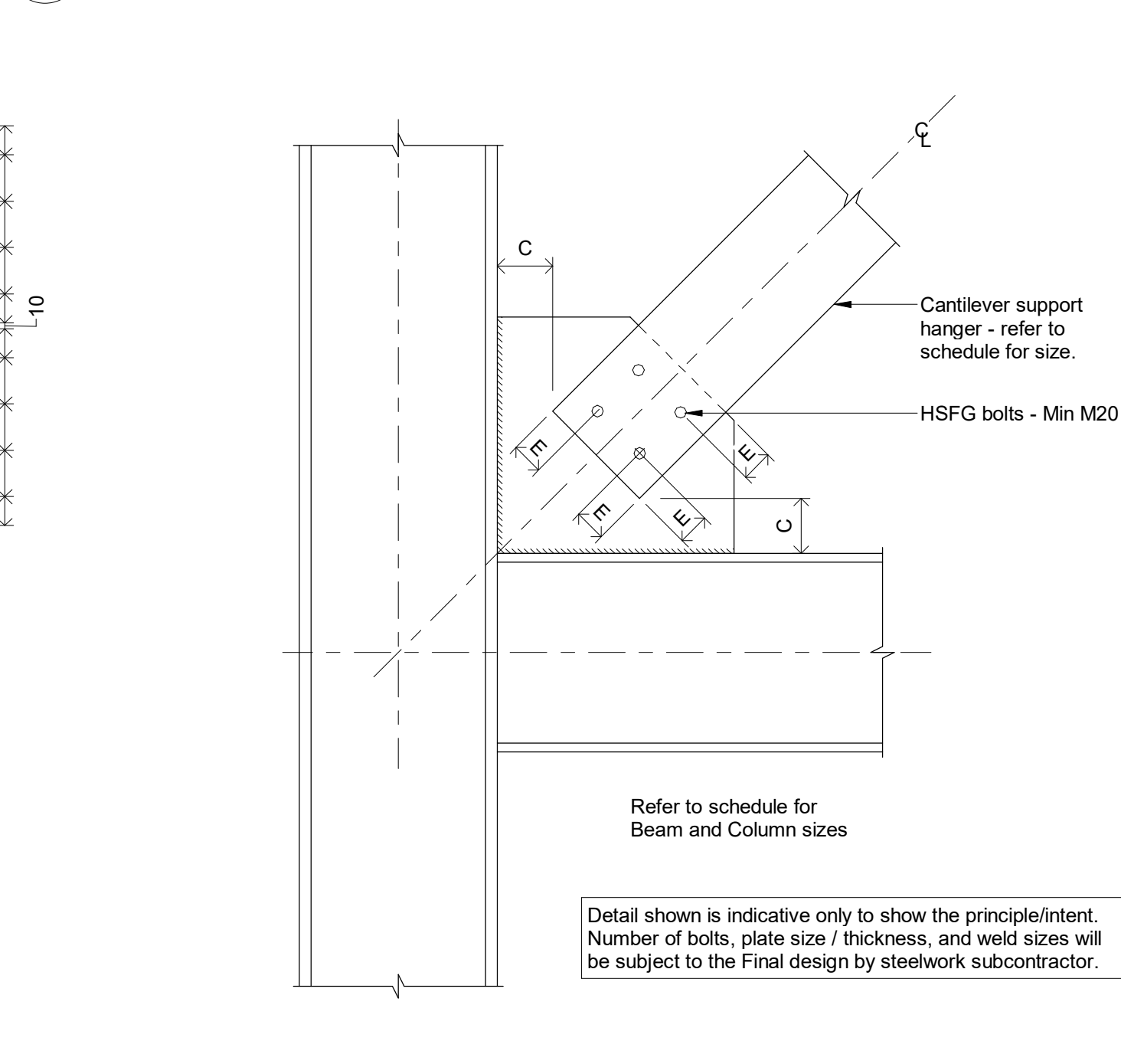
02 Bolted Beam to Beam Connection Intent (End Plate)
1 : 10



05 Typical Bolted Column Splice Detail Intent
1 : 10



03 Bolted Beam to Beam Connection Intent (Fin Plate)
1 : 10



06 Typical Cantilever Hanger Connection Detail Intent
1 : 10

General Notes

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T01	31.05.23	MK	AC	WIP - Tender Issue
Rev	Date	By	Chkd	Description

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Project Title
325 Deansgate

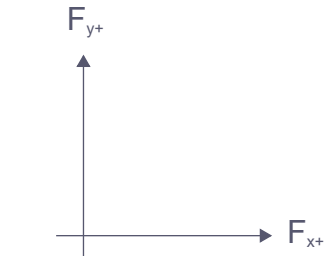
Drawing Title
Typical Superstructure Details
Sheet 2

Project No
22244
Scale:
1 : 10 [A1]
Drawn By
MK/SP
Date
February 2023

Drawing Suitability
S0 - Initial Issue
Ver

Drawing Number
DEA-EOC-XX-ZZ-DR-S-4951
Rev
T01

					Gravity		Wind						
					Dead Load	Live Load							
Pile no.	Diameter	Cutoff Level	Easting	Northing	Fz [kN]	Fz [kN]	Fx _{min} [kN]	Fx _{max} [kN]	Fx _{min} [kN]	Fy _{max} [kN]	Fz _{max} [kN]	Fz _{min} [kN]	
P1	750	31.475			1675	250	-60	60	-100	100	25	-350	
P2	750	31.475			1650	300	-60	60	-100	100	-240	-250	
P3	750	31.475			1500	300	-60	60	-100	100	-95	-310	
P4	750	31.475			1950	425	-60	60	-100	100	-235	-250	
P5	750	31.475			2225	500	-60	60	-100	100	10	-45	
P6	750	31.475			2625	575	-60	60	-100	100	230	155	
P7	750	31.475			1450	175	-60	60	-100	100	190	-870	
P8	750	31.475			1250	200	-60	60	-100	100	-235	-425	
P9	750	31.475			1250	225	-60	60	-100	100	-265	-365	
P10	750	31.475			1675	350	-60	60	-100	100	-110	-275	
P11	750	31.475			2050	450	-60	60	-100	100	110	-10	
P12	750	31.475			2475	575	-60	60	-100	100	400	240	
P13	750	31.475			1625	150	-60	60	-100	100	225	-1830	
P14	750	31.475			1450	225	-60	60	-100	100	-375	-1020	
P15	750	31.475			1400	250	-60	60	-100	100	-465	-585	
P16	750	31.475			1800	375	-60	60	-100	100	-225	-410	
P17	750	31.475			2225	500	-60	60	-100	100	185	-50	
P18	750	31.475			2625	625	-60	60	-100	100	535	225	
P19	750	31.475			1775	150	-60	60	-100	100	305	-2820	
P20	750	31.475			1725	225	-60	60	-100	100	-580	-1730	
P21	750	31.475			1600	275	-60	60	-100	100	-710	-925	
P22	750	31.475			1950	400	-60	60	-100	100	-260	-555	
P23	750	31.475			1950	150	-60	60	-100	100	390	-3555	
P24	750	31.475			1950	250	-60	60	-100	100	-955	-2550	
P25	750	31.475			2000	325	-60	60	-100	100	-1210	-1665	
P26	750	31.475			1900	350	-60	60	-100	100	-495	-1045	
P27	750	31.475			2100	450	-60	60	-100	100	5	-460	
P28	750	31.475			2450	575	-60	60	-100	100	405	-75	
P29	750	31.475			2150	425	-60	60	-100	100	-210	-1080	
P30	750	31.475			2400	550	-60	60	-100	100	420	-370	
P31	750	30.225			2075	200	-60	60	-100	100	45	-3665	
P32	750	30.225			2125	300	-60	60	-100	100	-1595	-2680	
P33	750	31.475			2200	350	-60	60	-100	100	-1255	-2305	
P34	750	31.475			2625	575	-60	60	-100	100	360	-1065	
P35	750	31.475			2125	350	-60	60	-100	100	-1495	-2510	
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P37	750	30.225			2225	275	-60	60	-100	100	-685	-3895	
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P47	750	31.475			1600	175	-60	60	-100	100	1030	-745	
P48	750	31.475			1675	125	-60	60	-100	100	1035	-2220	
P49	750	31.475			1775	125	-60	60	-100	100	995	-3265	
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P52	750	30.225			2300	350	-60	60	-100	100	-2195	-2605	
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P56	750	31.475			1200	150	-60	60	-100	100	780	-1115	
P57	750	31.475			1450	150	-60	60	-100	100	565	-2165	
P58	750	31.475			1500	175	-60	60	-100	100	120	-2100	
P59	750	30.225			1900	275	-60	60	-100	100	-1145	-1945	
P60	750	30.225			2400	400	-60	60	-100	100	-1425	-2550	
P61	750	30.225			2775	525	-60	60	-100	100	-825	-3450	
P62	750	31.475			3150	625	-60	60	-100	100	-260	-3895	
P63	750	28.725			1100	200	-60	60	-100	100	360	125	
P64	750	28.725			975	150	-60	60	-100	100	325	-510	
P65	750	28.725			1325	200	-60	60	-100	100	245	-990	
P66	750	28.725			1350	200	-60	60	-100	100	-105	-1180	
P67	750	28.725			1925	300	-60	60	-100	100	-825	-1150	
P68	750	28.725			2350	425	-60	60	-100	100	-645	-1840	
P69	750	28.725			2850	550	-60	60	-100	100	-300	-2700	
P70	750	28.725			3375	700	-60	60	-100	100	-55	-3555	
P71	750	28.725			1075	225	-60	60	-100	100	315	70	
P72	750	28.725			1025	175	-60	60	-100	100	-20	-75	
P73	750	28.725			1175	200	-60	60	-100	100	-90	-345	
P74	750	28.725			1475	250	-60	60	-100	100	-280	-490	
P75	750	28.725			2050	375	-60	60	-100	100	-350	-685	
P76	750	28.725			2475	475	-60	60	-100	100	-180	-1115	
P77	750	28.725			3425	725	-60	60	-100	100	50	-2255	
P78	750	28.725			1575	375	-60	60	-100	100	250	-65	
P79	750	28.725			1700	375	-60	60	-100	100	-40	-205	
P80	750	28.725			1825	375	-60	60	-100	100	-115	-255	
P81	750	28.725			2050	400	-60	60	-100	100	-150	-315	
P82	750	28.725			2325	475	-60	60	-100	100	-50	-355	
P83	750	28.725			2625	550	-60	60	-100	100	20	-490	
P84	750	28.725			3400	725	-60	60	-100	100	190	-900	



Note: All loads are unfactored

Note: Positive vertical reactions (Fz) denote compression in piles

- General Notes
1. This drawing is to be read in conjunction with all relevant Architects & Engineers drawings & specifications.

2. The Contractor is to be responsible for all dimensions & for the correct setting out of the works on site.

3. Do not scale from this drawing.

T02	23.06.23	MK	KJ	WIP - Tender Issue update	
T01	20.06.23	MK	AC	WIP - Tender Issue	
Rev	Date	By	Chkd	Description	

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Project Title

325 Deansgate

Drawing Title

Piling Schedule

Project No

22244

Scale:

[A1]

Drawn By

MK

Date

Jun 2023

Drawing Suitability

S1 - Suitable for Coordination

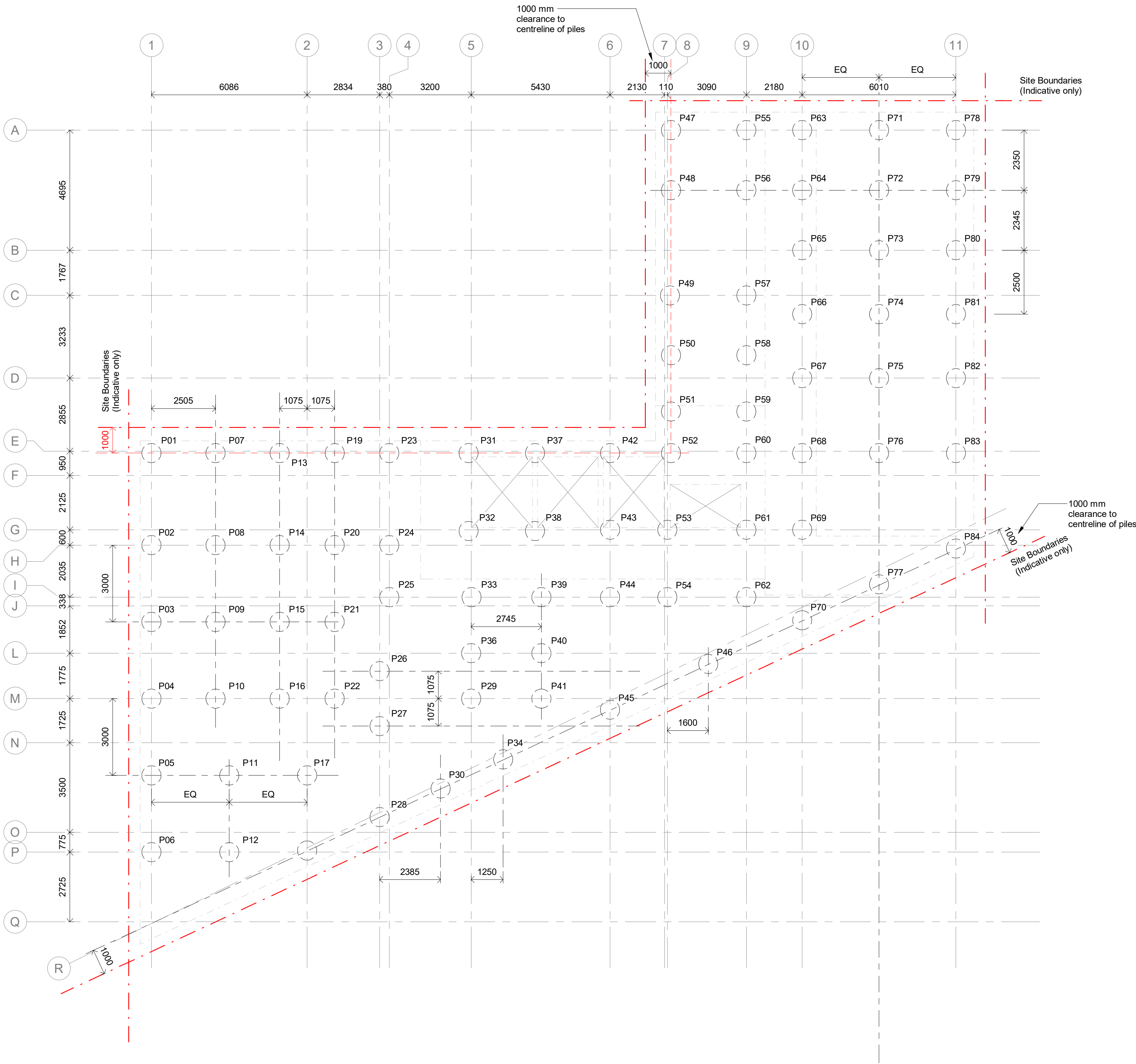
Ver

Drawing Number

DEA-EOC-XX-ZZ-DR-S-6000

Rev

T02



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 2. The Contractor is to be responsible for all dimensions & for the correct setting out of the works on site.
 3. Do not scale from this drawing.
 4. All piles are assumed to be 10 m long. Final pile design to be confirmed by piling contractor

T01	16.06.23	MK	AC	WIP - Tender Issue
Rev	Date	By	Chkd	Description

**Eckersley
O'Callaghan**

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+44 (0) 20 7354 5402 eocengineers.com

Project Title
325 Deansgate

Drawing Title
Piling
General Arrangement

Project No
22244

Scale:
1 : 100 [A1]

Drawn By
MK

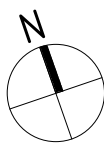
Date
May 2023

Drawing Suitability
S1 - Suitable for Coordination

Drawing Number
DEA-EOC-XX-00-DR-S-1000

Ver

Rev
T01

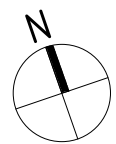


1. This drawing is to be read in conjunction with all relevant Architects & Engineers drawings & specifications.

3. Do not scale from this drawing.

Floor Schedule	
Ref.	Type
F01	140mm thk Composite Slab - Comflor 51 1.2 gauge
F02	200mm thk RC Slab
F04	2000mm thk RC Raft
F06	250mm thk RC slab

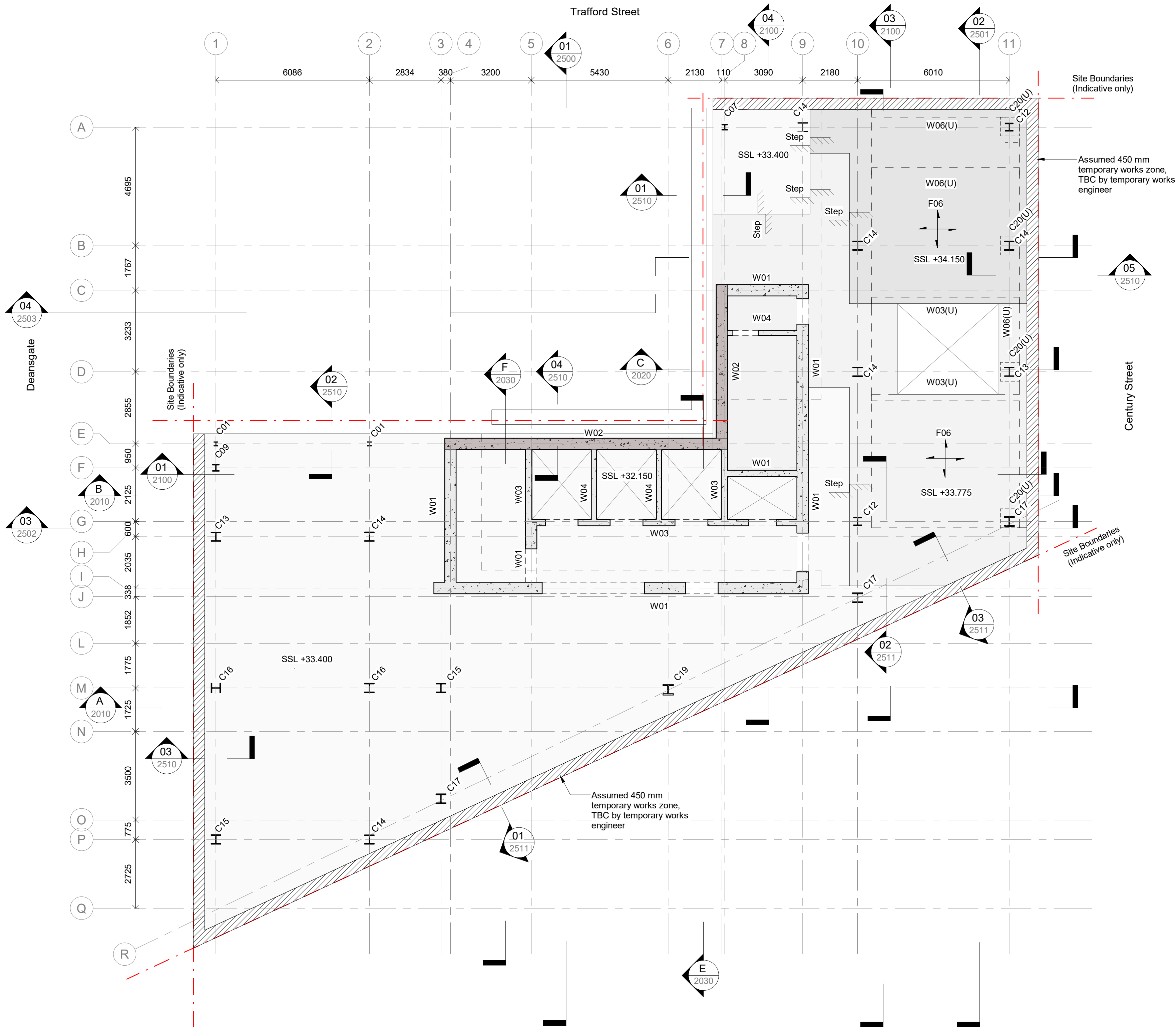
Wall Schedule	
Ref.	Type
W01	450mm thk RC Wall
W02	450mm thk Precast Twin Wall
W03	250mm thk RC Wall
W04	200mm thk RC Wall
W06	300mm thk RC Retaining Wall



**Eckersley
O'Callaghan**

Project Title
325 Deansgate

Project No 22244	Scale: 1 : 100 [A1]
Drawn By MK	Date May 2023
Drawing Suitability S1 - Suitable for Coordination	Ver
Drawing Number DEA-EOC-XX-00-DR-S-1010	Rev T01



- General Notes**
- This drawing is to be read in conjunction with all relevant Architects & Engineers drawings & specifications.
 - The Contractor is to be responsible for all dimensions & for the correct setting out of the works on site.
 - Do not scale from this drawing.

Floor Schedule	
Ref.	Type
F01	140mm thk Composite Slab - Comflor 51 1.2 gauge
F02	200mm thk RC Slab
F04	2000mm thk RC Raft
F06	250mm thk RC slab

Wall Schedule	
Ref.	Type
W01	450mm thk RC Wall
W02	450mm thk Precast Twin Wall
W03	250mm thk RC Wall
W04	200mm thk RC Wall
W06	300mm thk RC Retaining Wall

Steel Column Schedule	
Ref.	Type
C01	UC152x152x30
C02	UC152x152x37
C03	UC203x203x46
C04	UC203x203x52
C05	UC203x203x60
C06	UC203x203x71
C07	UC203x203x86
C08	UC254x254x73
C09	UC254x254x89
C10	UC254x254x107
C11	UC305x305x97
C12	UC305x305x118
C13	UC356x368x129
C14	UC356x368x153
C15	UC356x368x177
C16	UC356x368x202
C17	UC356x406x235
C18	UC356x406x340
C19	UC356x406x393

Steel Beam Schedule	
Ref.	Type
B01	UB356x171x67
B02	UB305x165x46
B03	UC152x152x23
B04	UC305x305x118
B05	UC152x152x30
B06	UC305x305x137
B07	L120x120x8
B08	UC305x305x97
B09	UC203x203x52

RC Columns Schedule	
Ref.	Type
C20	750x750mm RC Pier

T02	16.06.23	MK	AC	WIP - Tender Issue
T01	31.05.23	MK	AC	WIP - Tender Issue
Rev	Date	By	Chkd	Description

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Project Title
325 Deansgate

Drawing Title
Level 00
General Arrangement

Project No
22244

Scale:
1 : 100 [A1]

Drawn By
MK

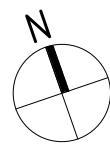
Date
February 2023

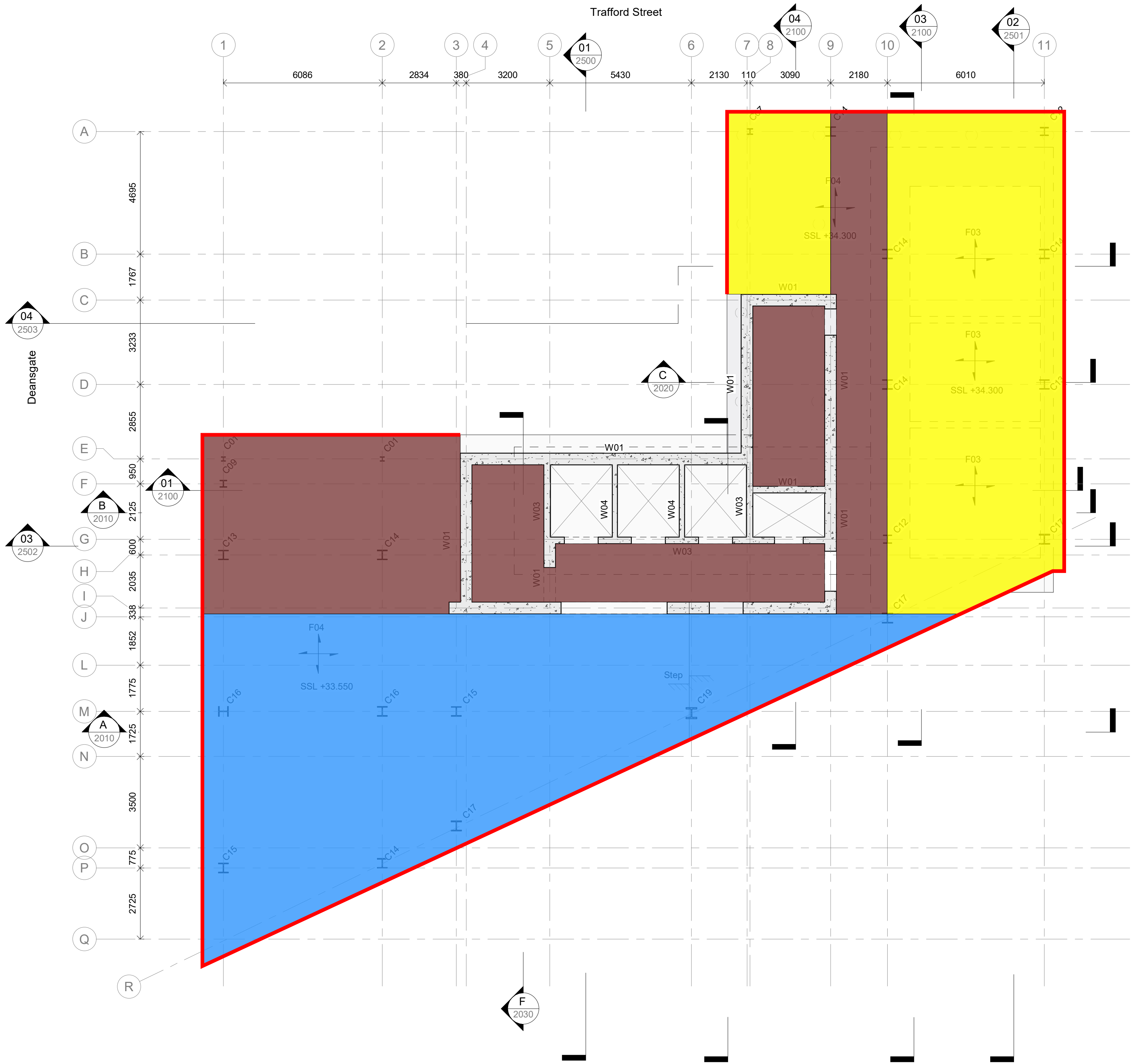
Drawing Suitability
S1 - Suitable for Coordination

Ver

Drawing Number
DEA-EOC-XX-00-DR-S-1020

Rev
T02





- Legend**
- Circulation
SIDL = 1.05 kPa
LL = 4.0 kPa
 - Plant Room
SIDL = 1.50 kPa
LL = 7.50 kPa
 - Bike Store
SIDL = 1.50 kPa
LL = 2.50 kPa
 - Reception
SIDL = 1.05 kPa
LL = 3.0 kPa
 - GRC Cladding
DL = 6.70 kN/m
 - GRC Cladding
DL = 5.50 kN/m
 - Aluminium Curtain walls
DL = 3.0 kN/m

- General Notes**
- This drawing is to be read in conjunction with all relevant Architects & Engineers drawings & specifications.
 - The Contractor is to be responsible for all dimensions & for the correct setting out of the works on site.
 - Do not scale from this drawing.

T01	31.05.23	MK	AC	WIP - Tender Issue
Rev	Date	By	Chkd	Description

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Project Title
325 Deansgate

Drawing Title
Level 00
Loading Plan

Project No
22244

Scale:
1 : 100 [A1]

Drawn By
MK

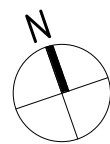
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February 2023

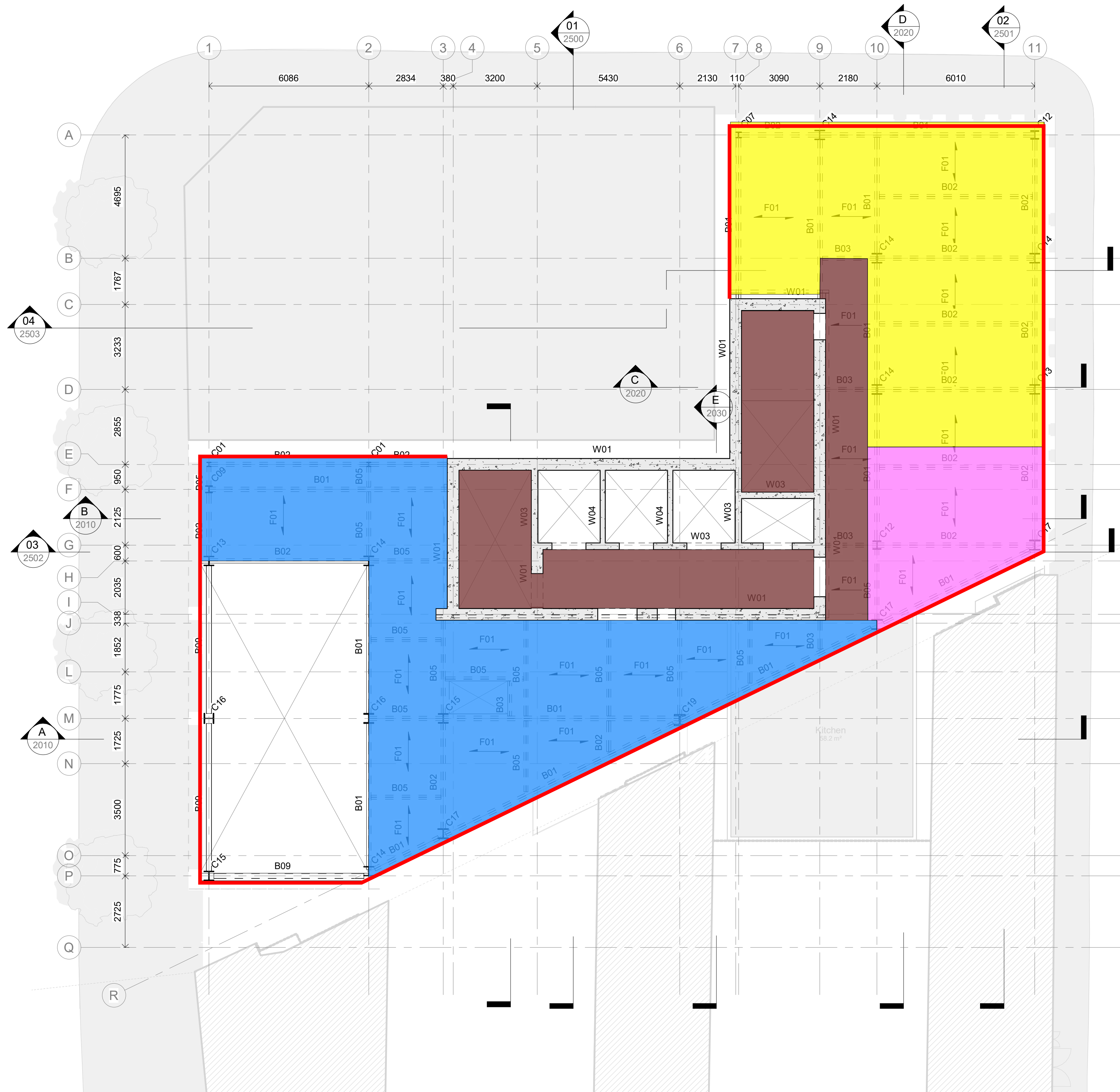
Drawing Suitability
S0 - Initial Issue

Ver

Drawing Number
DEA-EOC-XX-00-DR-S-7020

Rev
T01





- Legend**
- Circulation
SIDL = 1.05 kPa
LL = 4.0 kPa
 - Plant Room
SIDL = 1.50 kPa
LL = 7.50 kPa
 - Bike Store
SIDL = 1.50 kPa
LL = 2.50 kPa
 - Reception
SIDL = 1.05 kPa
LL = 3.0 kPa
 - GRC Cladding
DL = 6.70 kN/m
 - GRC Cladding
DL = 5.50 kN/m
 - Aluminium Curtain walls
DL = 3.0 kN/m

- General Notes**
- This drawing is to be read in conjunction with all relevant Architects & Engineers drawings & specifications.
 - The Contractor is to be responsible for all dimensions & for the correct setting out of the works on site.
 - Do not scale from this drawing.

T01	31.05.23	MK	AC	WIP - Tender Issue
Rev	Date	By	Chkd	Description

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Project Title
325 Deansgate

Drawing Title
Level 00 Mezzanine
Loading Plan

Project No
22244

Scale:
1 : 100 [A1]

Drawn By
MK

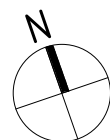
Date
February 2023

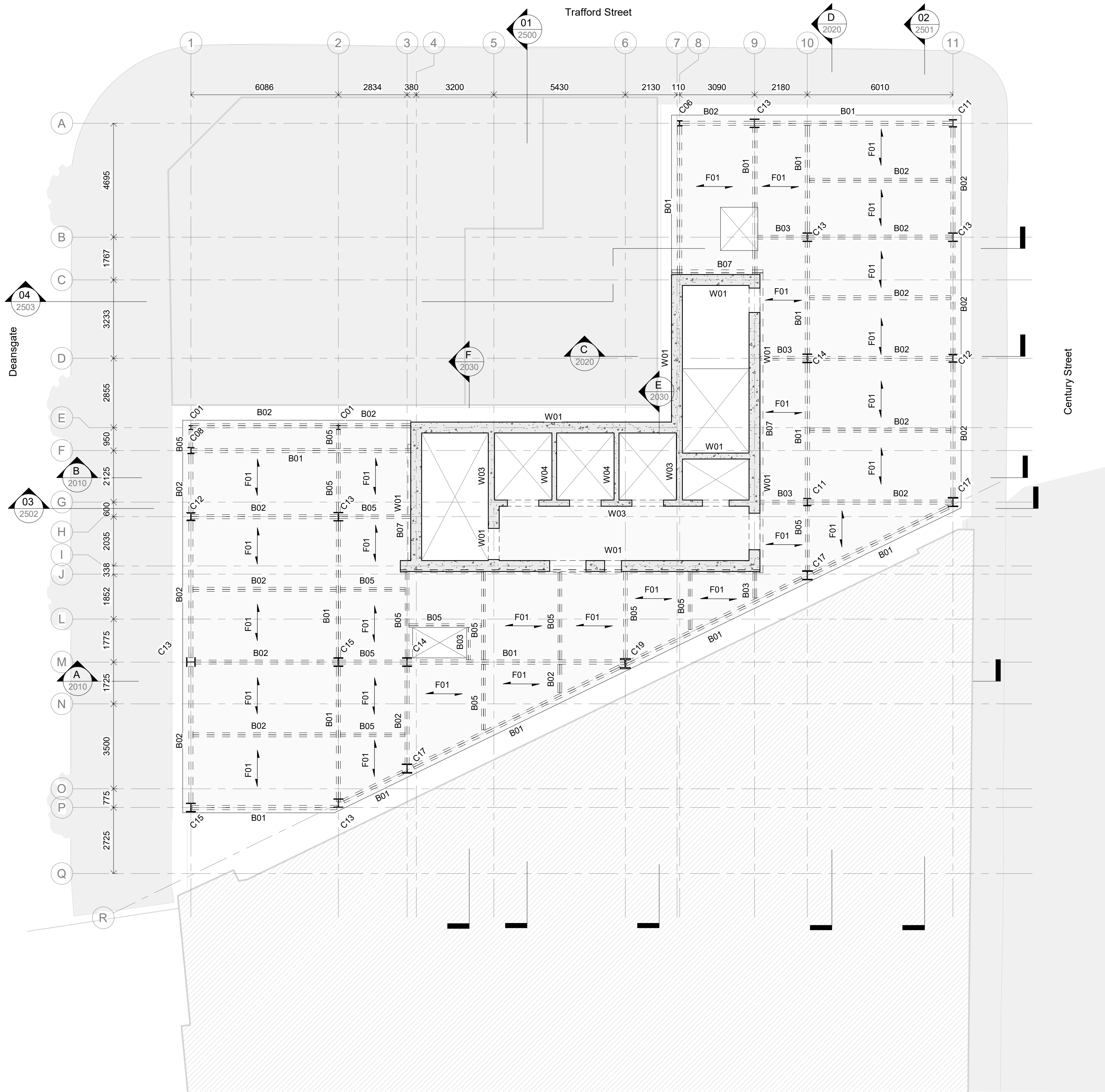
Drawing Suitability
S0 - Initial Issue

Ver

Drawing Number
DEA-EOC-XX-01M-DR-S-7030

Rev
T01





- General Notes**
1. This drawing is to be read in conjunction with all relevant Architects & Engineers drawings & specifications.
 2. The Contractor is to be responsible for all dimensions & for the correct setting out of the works on site.
 3. Do not scale from this drawing.

Floor Schedule	
Ref.	Type
F01	140mm thk Composite Slab - Comflor 51 1.2 gauge
F02	200mm thk RC Slab
F03	300mm thk RC slab
F04	1500mm thk RC Raft

Wall Schedule	
Ref.	Type
W01	450mm thk RC Wall
W03	250mm thk RC Wall
W04	200mm thk RC Wall

Steel Column Schedule	
Ref.	Type
C01	UC152x152x30
C02	UC152x152x37
C03	UC203x203x46
C04	UC203x203x52
C05	UC203x203x60
C06	UC203x203x71
C07	UC203x203x86
C08	UC254x254x73
C09	UC254x254x89
C10	UC254x254x107
C11	UC305x305x97
C12	UC305x305x118
C13	UC356x368x129
C14	UC356x368x153
C15	UC356x368x177
C16	UC356x368x202
C17	UC356x406x235
C18	UC356x406x340
C19	UC356x406x393

Steel Beam Schedule	
Ref.	Type
B01	UB356x171x67
B02	UB305x165x46
B03	UC152x152x23
B04	UC305x305x118
B05	UC152x152x30
B06	UC305x305x137
B07	L120x120x8
B08	UC305x305x97
B09	UC203x203x52

T01	31.05.23	MK	AC	WIP - Tender Issue
Rev	Date	By	Chkd	Description

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Project Title
325 Deansgate

Drawing Title
Level 01
General Arrangement (Typical 01-03)

Project No
22244

Scale:
1 : 100 [A1]

Drawn By
MK

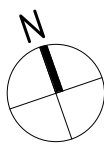
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February 2023

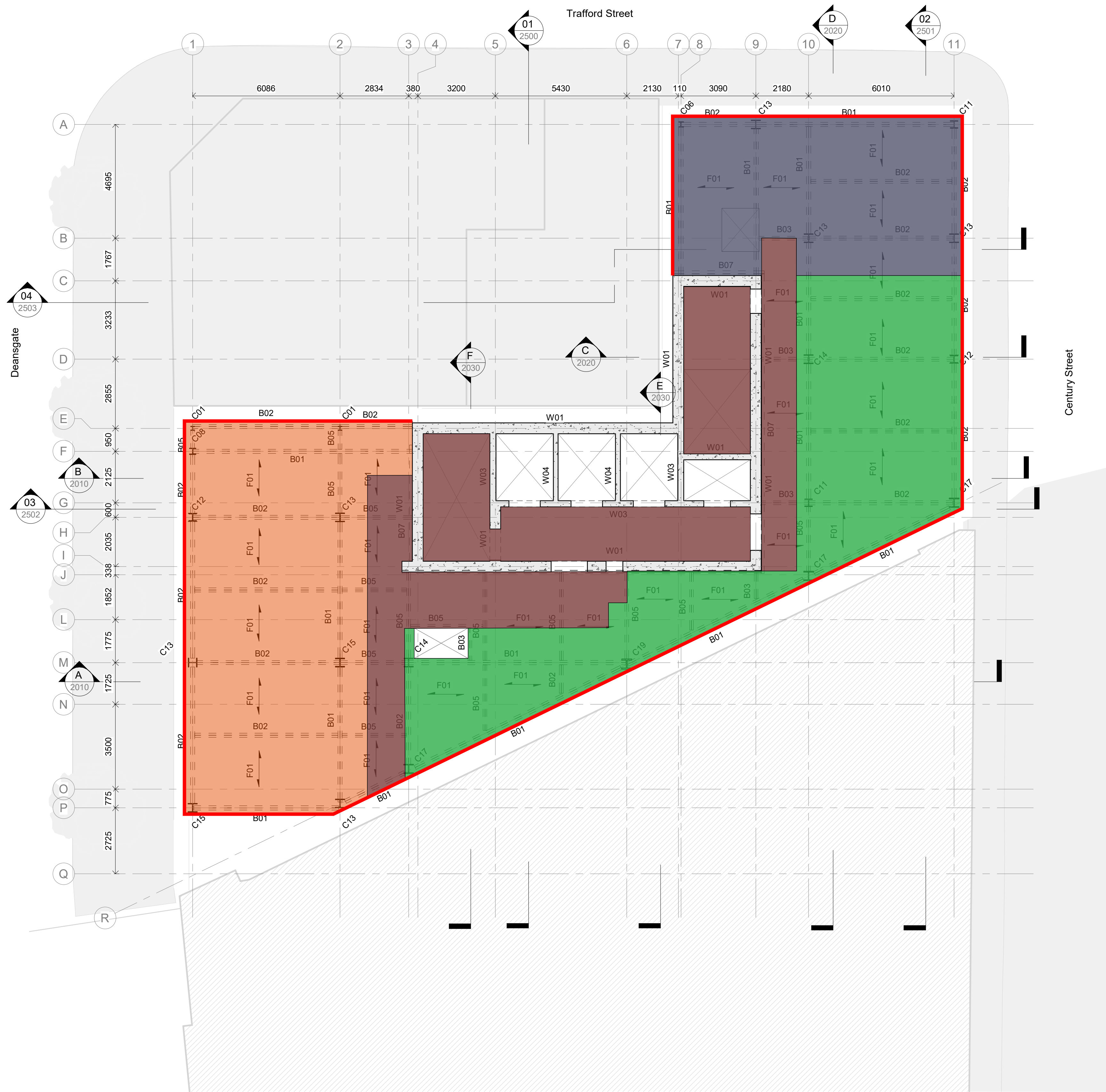
Drawing Suitability
S0 - Initial Issue

Ver

Drawing Number
DEA-EOC-XX-01-DR-S-1040

Rev
T01





- Legend**
- Circulation
SIDL = 1.05 kPa
LL = 4.0 kPa
 - Kitchen & Services
SIDL = 1.50 kPa
LL = 3.0 kPa
 - Hotel Bedrooms
SIDL = 1.05 kPa
LL = 2.50 kPa
 - Storage
SIDL = 1.50 kPa
LL = 5.0 kPa
 - GRC Cladding
DL = 6.70 kN/m
 - GRC Cladding
DL = 5.50 kN/m
 - Aluminium Curtain walls
DL = 3.0 kN/m

- General Notes**
1. This drawing is to be read in conjunction with all relevant Architects & Engineers drawings & specifications.
 2. The Contractor is to be responsible for all dimensions & for the correct setting out of the works on site.
 3. Do not scale from this drawing.

T01	31.05.23	MK	AC	WIP - Tender Issue
Rev	Date	By	Chkd	Description

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O'Callaghan**

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Project Title
325 Deansgate

Drawing Title
Level 01
Loading Plan

Project No
22244

Scale:
1 : 100 [A1]

Drawn By
MK

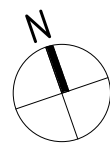
Date
February 2023

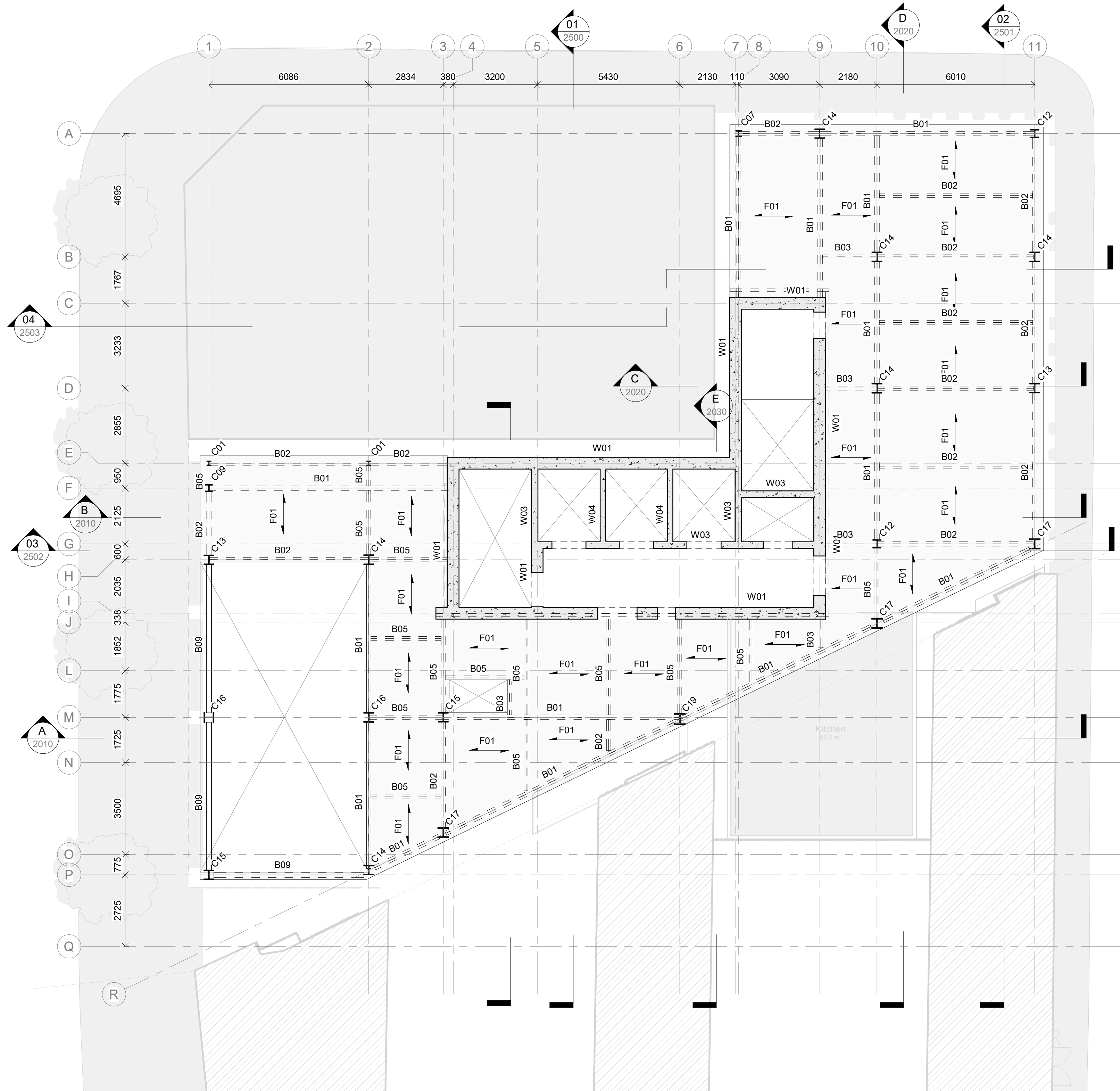
Drawing Suitability
S0 - Initial Issue

Ver

Drawing Number
DEA-EOC-XX-01-DR-S-7040

Rev
T01





- General Notes**
- This drawing is to be read in conjunction with all relevant Architects & Engineers drawings & specifications.
 - The Contractor is to be responsible for all dimensions & for the correct setting out of the works on site.
 - Do not scale from this drawing.

Floor Schedule	
Ref.	Type
F01	140mm thk Composite Slab - Comflor 51 1.2 gauge
F02	200mm thk RC Slab
F03	300mm thk RC slab
F04	1500mm thk RC Raft

Wall Schedule	
Ref.	Type
W01	450mm thk RC Wall
W03	250mm thk RC Wall
W04	200mm thk RC Wall

Steel Column Schedule	
Ref.	Type
C01	UC152x152x30
C02	UC152x152x37
C03	UC203x203x46
C04	UC203x203x52
C05	UC203x203x60
C06	UC203x203x71
C07	UC203x203x86
C08	UC254x254x73
C09	UC254x254x89
C10	UC254x254x107
C11	UC305x305x97
C12	UC305x305x118
C13	UC356x368x129
C14	UC356x368x153
C15	UC356x368x177
C16	UC356x368x202
C17	UC356x406x235
C18	UC356x406x340
C19	UC356x406x393

Steel Beam Schedule	
Ref.	Type
B01	UB356x171x67
B02	UB305x165x46
B03	UC152x152x23
B04	UC305x305x118
B05	UC152x152x30
B06	UC305x305x137
B07	L120x120x8
B08	UC305x305x97
B09	UC203x203x52

T01	31.05.23	MK	AC	WIP - Tender Issue
Rev	Date	By	Chkd	Description

Eckersley
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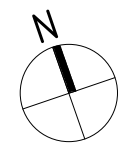
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Project Title

325 Deansgate

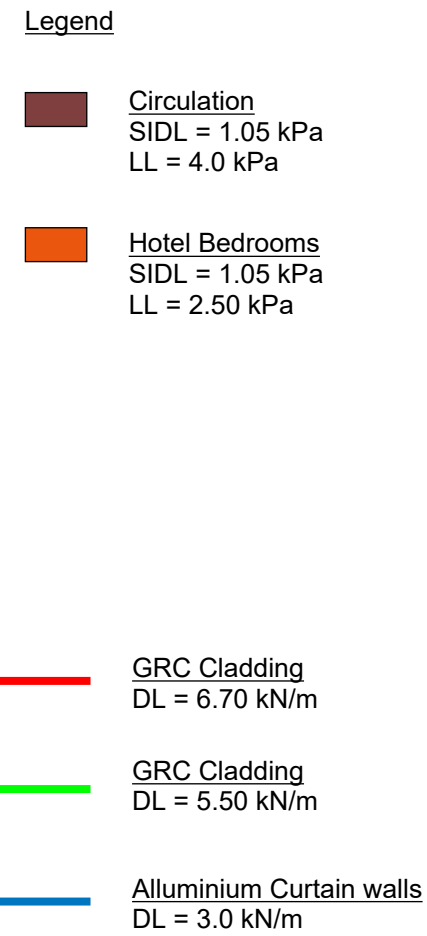
Drawing Title
Level 00 Mezzanine
General Arrangement

Project No 22244	Scale: 1 : 100 [A1]
Drawn By MK	Date February 2023
Drawing Suitability S0 - Initial Issue	Ver
Drawing Number DEA-EOC-XX-01M-DR-S-1030	Rev T01



1. This drawing is to be read in conjunction with all relevant Architects & Engineers drawings & specifications.

3. Do not scale from this drawing.

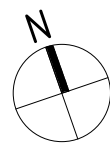


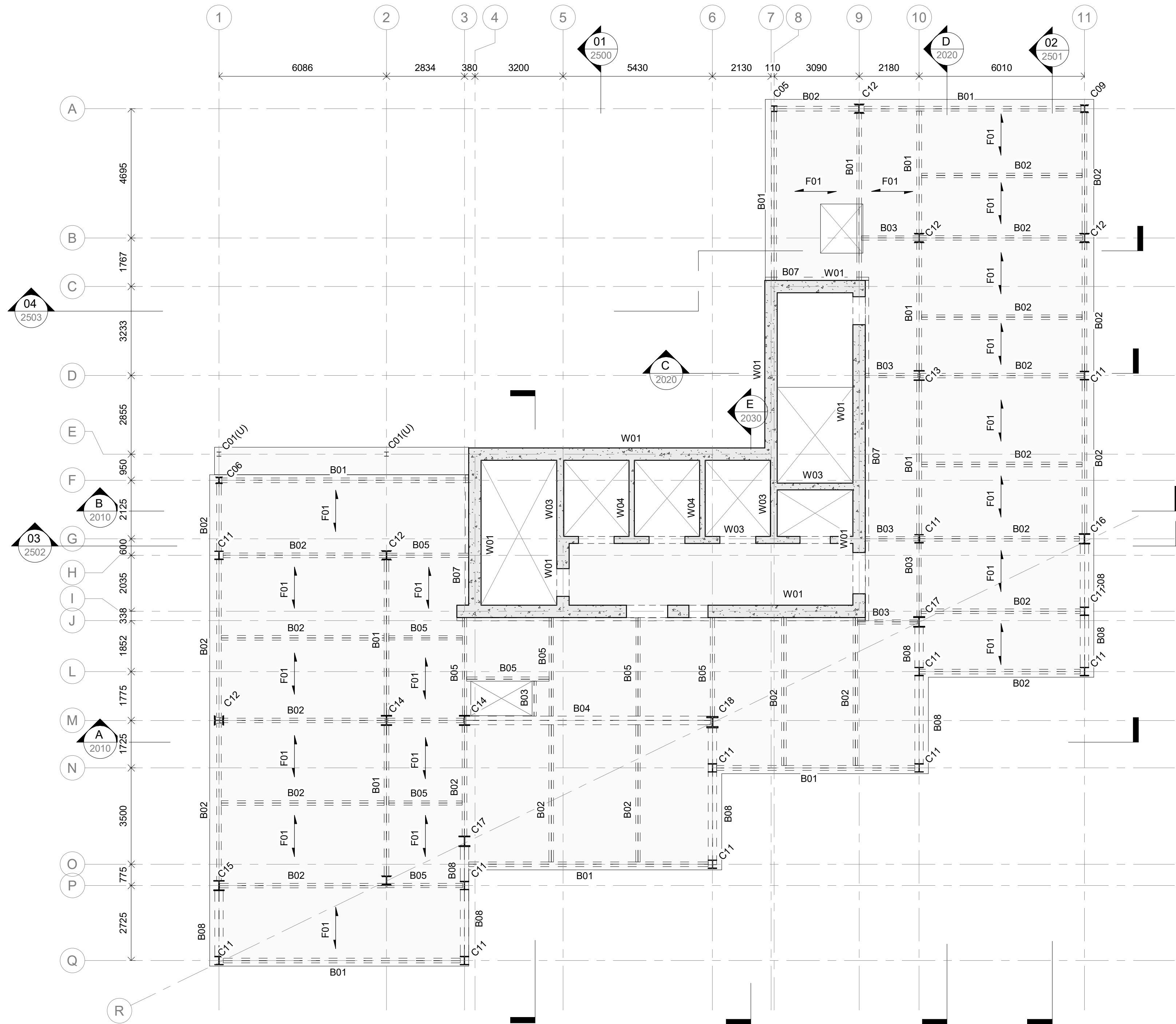
**Eckersley
O'Callaghan**

Drawn By
MK

Date
February 2023

Drawing Number	Rev
DEA-EOC-XX-01-DR-S-7050	T01





- General Notes**
1. This drawing is to be read in conjunction with all relevant Architects & Engineers drawings & specifications.
 2. The Contractor is to be responsible for all dimensions & for the correct setting out of the works on site.
 3. Do not scale from this drawing.

Floor Schedule	
Ref.	Type
F01	140mm thk Composite Slab - Comflor 51 1.2 gauge
F02	200mm thk RC Slab
F03	300mm thk RC slab
F04	1500mm thk RC Raft

Wall Schedule	
Ref.	Type
W01	450mm thk RC Wall
W03	250mm thk RC Wall
W04	200mm thk RC Wall

Steel Column Schedule	
Ref.	Type
C01	UC152x152x30
C02	UC152x152x37
C03	UC203x203x46
C04	UC203x203x52
C05	UC203x203x60
C06	UC203x203x71
C07	UC203x203x86
C08	UC254x254x73
C09	UC254x254x89
C10	UC254x254x107
C11	UC305x305x97
C12	UC305x305x118
C13	UC356x368x129
C14	UC356x368x153
C15	UC356x368x177
C16	UC356x368x202
C17	UC356x406x235
C18	UC356x406x340
C19	UC356x406x393

Steel Beam Schedule	
Ref.	Type
B01	UB356x171x67
B02	UB305x165x46
B03	UC152x152x23
B04	UC305x305x118
B05	UC152x152x30
B06	UC305x305x137
B07	L120x120x8
B08	UC305x305x97
B09	UC203x203x52

T01	31.05.23	MK	AC	WIP - Tender Issue
Rev	Date	By	Chkd	Description

Eckersley O'Callaghan

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Project Title
325 Deansgate

Drawing Title
Level 04
General Arrangement

Project No
22244

Scale:
1 : 100 [A1]

Drawn By
MK

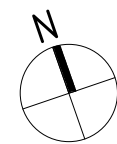
Date
February 2023

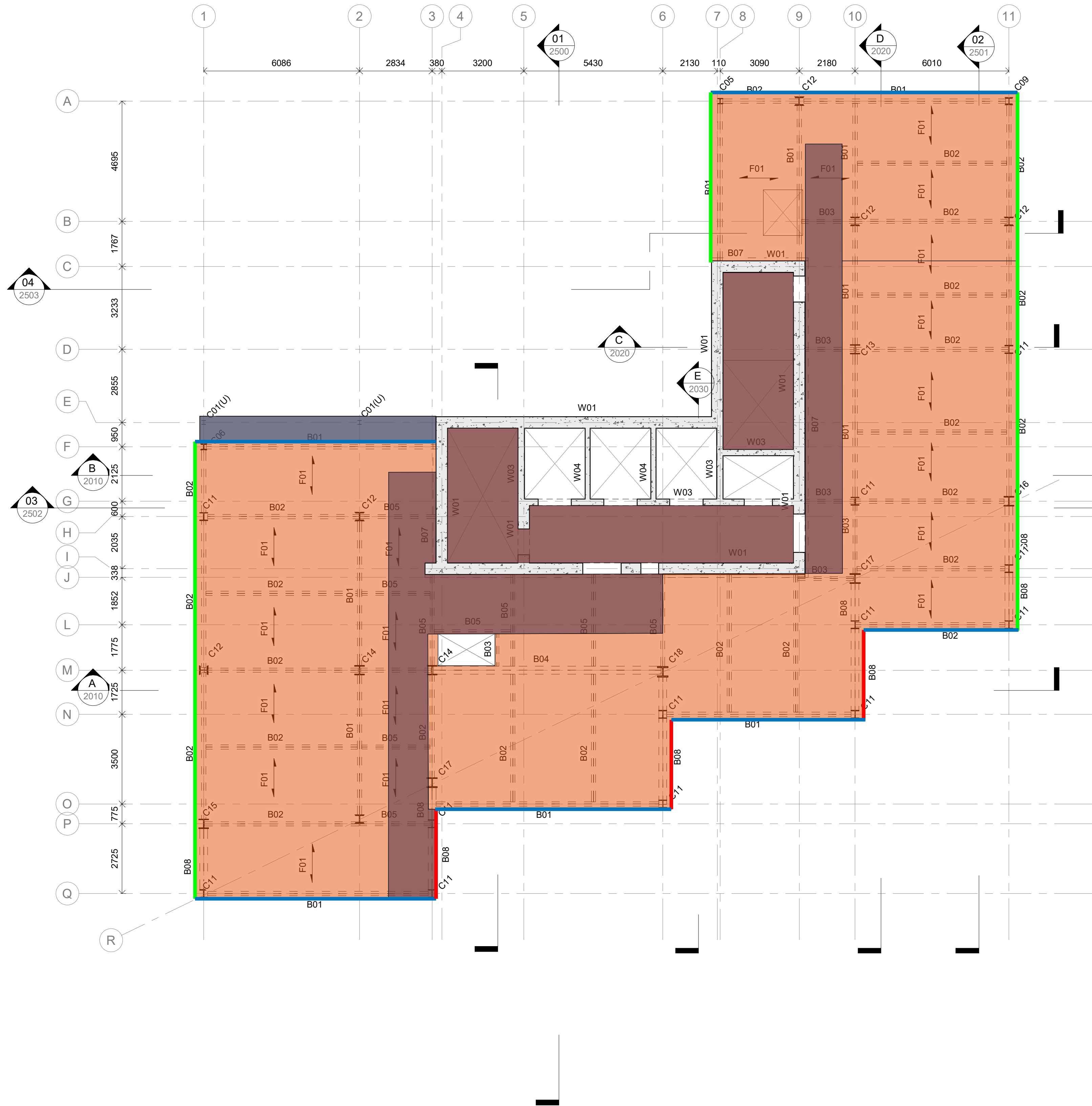
Drawing Suitability
S0 - Initial Issue

Ver

Drawing Number
DEA-EOC-XX-04-DR-S-1070

Rev
T01





- Legend**
- Circulation
SIDL = 1.05 kPa
LL = 4.0 kPa
 - Hotel Bedrooms
SIDL = 1.05 kPa
LL = 2.50 kPa
 - Roof for maintenance access only
SIDL = 1.50 kPa
LL = 0.75 kPa
 - GRC Cladding
DL = 6.70 kN/m
 - GRC Cladding
DL = 5.50 kN/m
 - Aluminium Curtain walls
DL = 3.0 kN/m

- General Notes**
- This drawing is to be read in conjunction with all relevant Architects & Engineers drawings & specifications.
 - The Contractor is to be responsible for all dimensions & for the correct setting out of the works on site.
 - Do not scale from this drawing.

T01	31.05.23	MK	AC	WIP - Tender Issue
Rev	Date	By	Chkd	Description

**Eckersley
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Project Title
325 Deansgate

Drawing Title
Level 04
Loading Plan

Project No
22244

Scale:
1 : 100 [A1]

Drawn By
MK

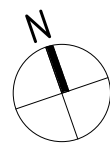
Date
February 2023

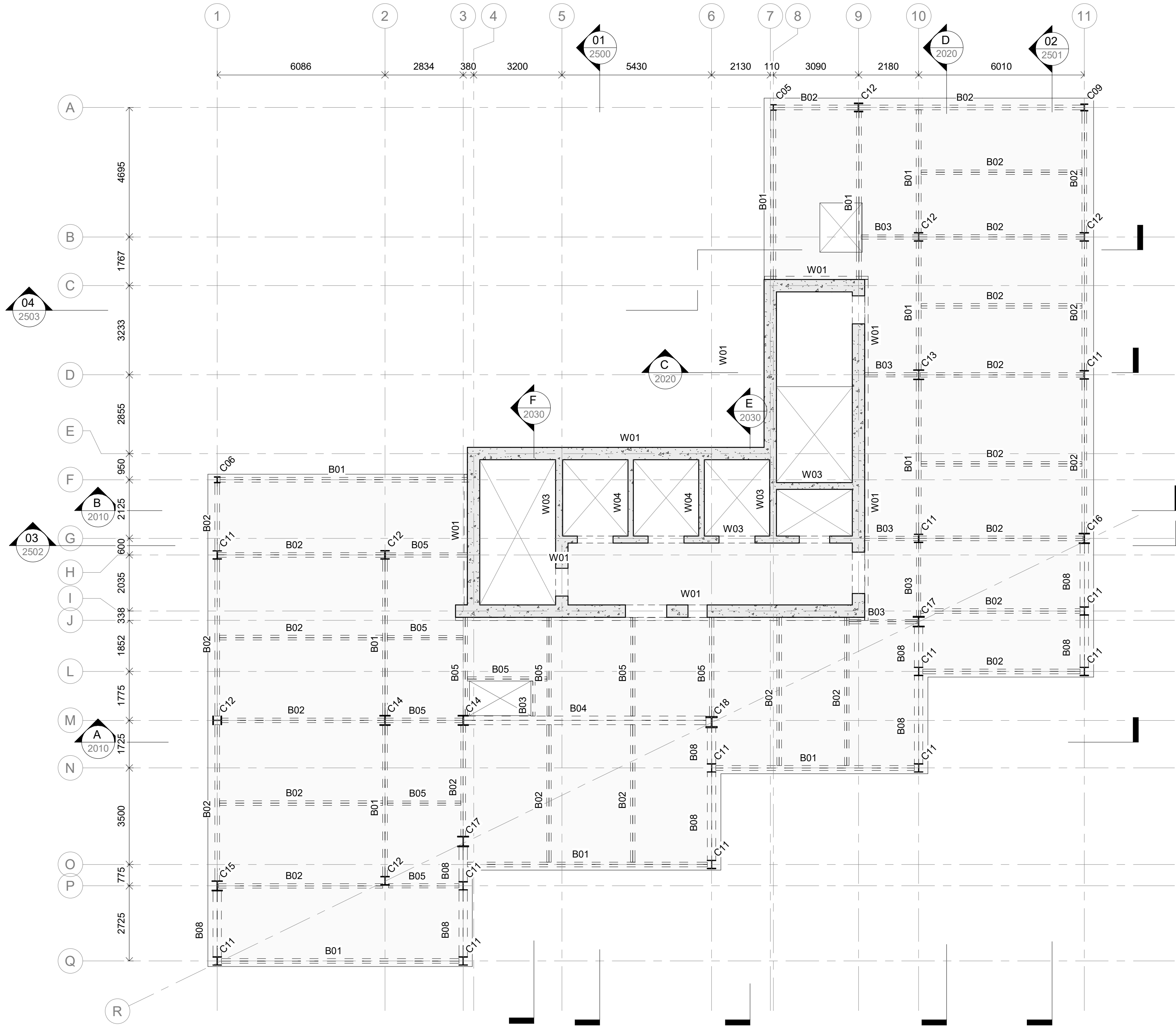
Drawing Suitability
S0 - Initial Issue

Ver

Drawing Number
DEA-EOC-XX-04-DR-S-7070

Rev
T01





- General Notes**
1. This drawing is to be read in conjunction with all relevant Architects & Engineers drawings & specifications.
 2. The Contractor is to be responsible for all dimensions & for the correct setting out of the works on site.
 3. Do not scale from this drawing.

Floor Schedule	
Ref.	Type
F01	140mm thk Composite Slab - Comflor 51 1.2 gauge
F02	200mm thk RC Slab
F03	300mm thk RC slab
F04	1500mm thk RC Raft

Wall Schedule	
Ref.	Type
W01	450mm thk RC Wall
W03	250mm thk RC Wall
W04	200mm thk RC Wall

Steel Column Schedule	
Ref.	Type
C01	UC152x152x30
C02	UC152x152x37
C03	UC203x203x46
C04	UC203x203x52
C05	UC203x203x60
C06	UC203x203x71
C07	UC203x203x86
C08	UC254x254x73
C09	UC254x254x89
C10	UC254x254x107
C11	UC305x305x97
C12	UC305x305x118
C13	UC356x368x129
C14	UC356x368x153
C15	UC356x368x177
C16	UC356x368x202
C17	UC356x406x235
C18	UC356x406x340
C19	UC356x406x393

Steel Beam Schedule	
Ref.	Type
B01	UB356x171x67
B02	UB305x165x46
B03	UC152x152x23
B04	UC305x305x118
B05	UC152x152x30
B06	UC305x305x137
B07	L120x120x8
B08	UC305x305x97
B09	UC203x203x52

T01	31.05.23	MK	AC	WIP - Tender Issue
Rev	Date	By	Chkd	Description

**Eckersley
O'Callaghan**

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Project Title
325 Deansgate

Drawing Title
Level 05
General Arrangement (Typical 05-21)

Project No
22244

Scale:
1 : 100 [A1]

Drawn By
MK

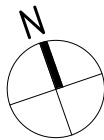
Date
February 2023

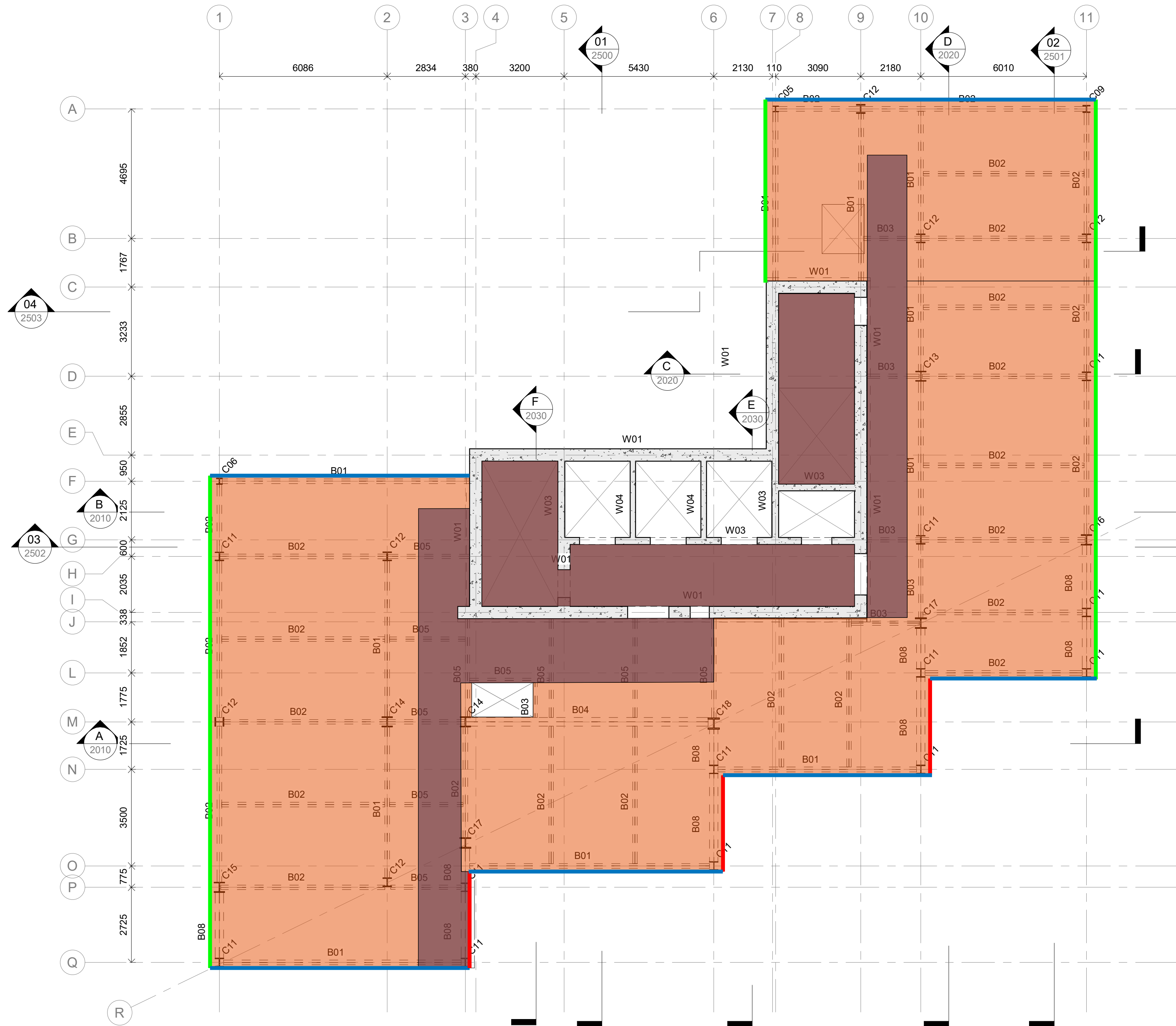
Drawing Suitability
S0 - Initial Issue

Ver

Drawing Number
DEA-EOC-XX-05-DR-S-1080

Rev
T01





- Legend**
- Circulation
SIDL = 1.05 kPa
LL = 4.0 kPa
 - Hotel Bedrooms
SIDL = 1.05 kPa
LL = 2.50 kPa
 - GRC Cladding
DL = 6.70 kN/m
 - GRC Cladding
DL = 5.50 kN/m
 - Aluminium Curtain walls
DL = 3.0 kN/m

- General Notes**
- This drawing is to be read in conjunction with all relevant Architects & Engineers drawings & specifications.
 - The Contractor is to be responsible for all dimensions & for the correct setting out of the works on site.
 - Do not scale from this drawing.

T01	31.05.23	MK	AC	WIP - Tender Issue
Rev	Date	By	Chkd	Description

**Eckersley
O'Callaghan**

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Project Title
325 Deansgate

Drawing Title
Level 05
Loading Plan (Typical 05-21)

Project No
22244

Scale:
1 : 100 [A1]

Drawn By
MK

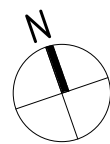
Date
February 2023

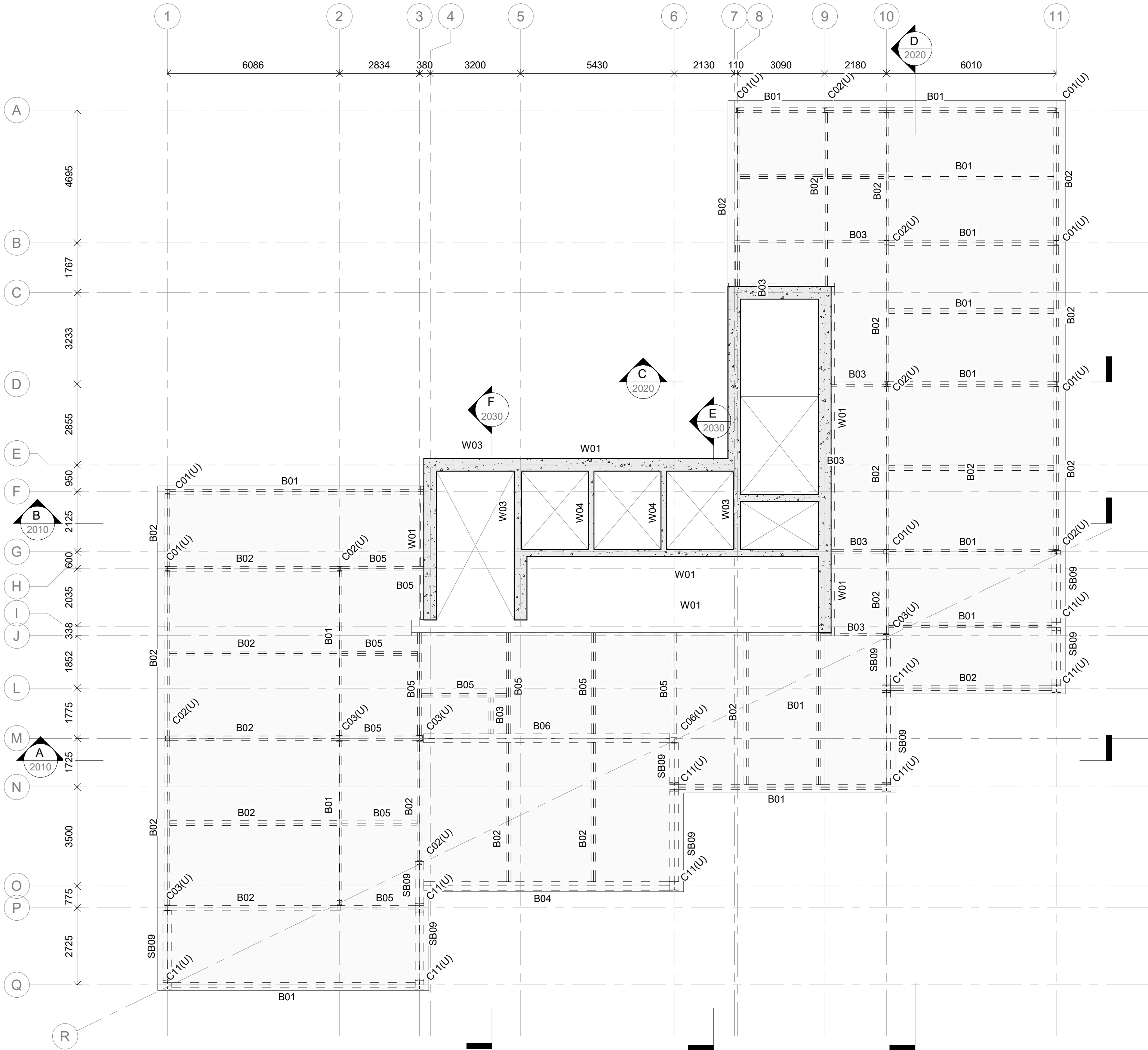
Drawing Suitability
S0 - Initial Issue

Ver

Drawing Number
DEA-EOC-XX-05-DR-S-7080

Rev
T01





- General Notes**
1. This drawing is to be read in conjunction with all relevant Architects & Engineers drawings & specifications.
 2. The Contractor is to be responsible for all dimensions & for the correct setting out of the works on site.
 3. Do not scale from this drawing.

Floor Schedule	
Ref.	Type
F01	140mm thk Composite Slab - Comflor 51 1.2 gauge
F02	200mm thk RC Slab
F03	300mm thk RC slab
F04	1500mm thk RC Raft

Wall Schedule	
Ref.	Type
W01	450mm thk RC Wall
W03	250mm thk RC Wall
W04	200mm thk RC Wall

Steel Column Schedule	
Ref.	Type
C01	UC152x152x30
C02	UC152x152x37
C03	UC203x203x46
C04	UC203x203x52
C05	UC203x203x60
C06	UC203x203x71
C07	UC203x203x86
C08	UC254x254x73
C09	UC254x254x89
C10	UC254x254x107
C11	UC305x305x97
C12	UC305x305x118
C13	UC356x368x129
C14	UC356x368x153
C15	UC356x368x177
C16	UC356x368x202
C17	UC356x406x235
C18	UC356x406x340
C19	UC356x406x393

Steel Beam Schedule	
Ref.	Type
B01	UB356x171x67
B02	UB305x165x46
B03	UC152x152x23
B04	UC305x305x118
B05	UC152x152x30
B06	UC305x305x137
B07	L120x120x8
B08	UC305x305x97
B09	UC203x203x52

T01	31.05.23	MK	AC	WIP - Tender Issue
Rev	Date	By	Chkd	Description

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O'Callaghan**

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Project Title
325 Deansgate

Drawing Title
Level 22
General Arrangement (Roof)

Project No
22244

Scale:
1 : 100 [A1]

Drawn By
MK

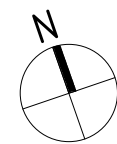
Date
February 2023

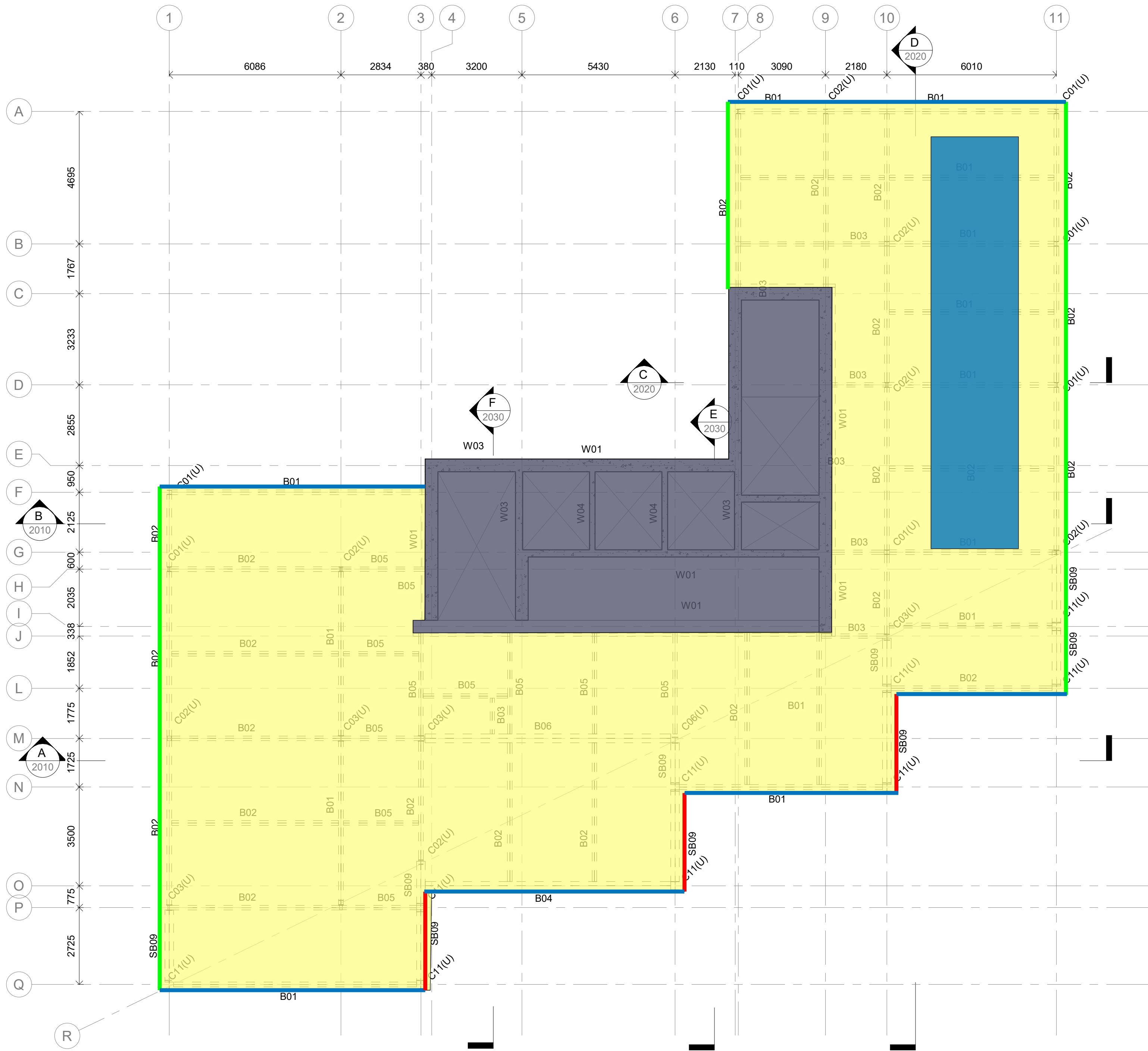
Drawing Suitability
S0 - Initial Issue

Ver

Drawing Number
DEA-EOC-XX-22-DR-S-1250

Rev
T01





- Legend**
- Water storage cylinders
SIDL = 4.50 kPa
LL = 15.0 kPa
 - Plant Roof
SIDL = 4.50 kPa
LL = 5.0 kPa
 - Roof for maintenance access only
SIDL = 1.50 kPa
LL = 0.75 kPa
 - GRC Cladding
DL = 6.70 kN/m
 - GRC Cladding
DL = 5.50 kN/m
 - Aluminium Curtain walls
DL = 3.0 kN/m

- General Notes**
- This drawing is to be read in conjunction with all relevant Architects & Engineers drawings & specifications.
 - The Contractor is to be responsible for all dimensions & for the correct setting out of the works on site.
 - Do not scale from this drawing.

T01	31.05.23	MK	AC	WIP - Tender Issue	
Rev	Date	By	Chkd	Description	

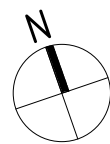
**Eckersley
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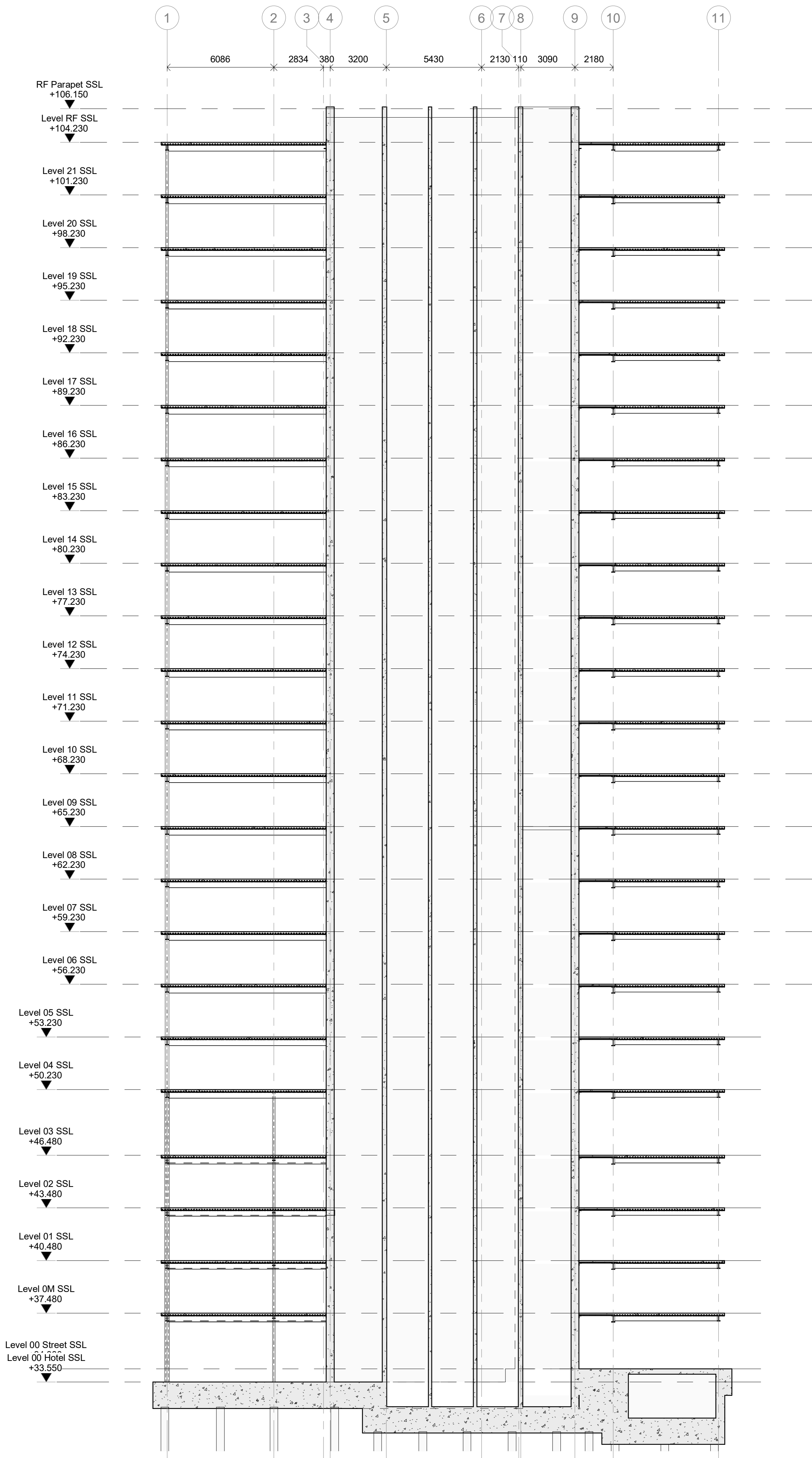
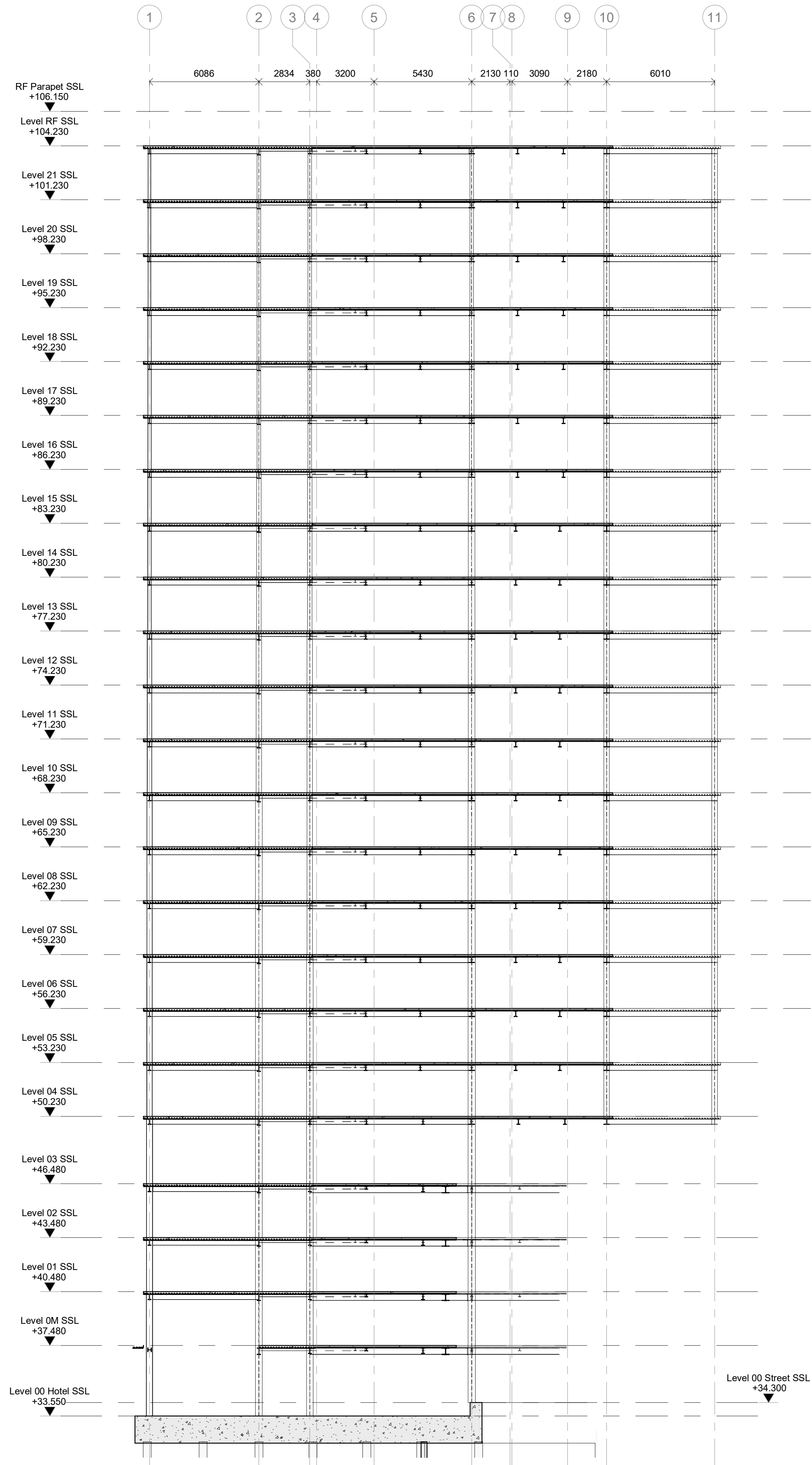
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Project Title
325 Deansgate

Drawing Title
Level 22
Loading Plan (Roof)

Project No 22244	Scale: 1 : 100 [A1]
Drawn By MK	Date February 2023
Drawing Suitability S0 - Initial Issue	Ver
Drawing Number DEA-EOC-XX-22-DR-S-7250	Rev T01





General Notes

1. This drawing is to be read in conjunction with all relevant Architects & Engineers drawings & specifications.
2. The Contractor is to be responsible for all dimensions & for the correct setting out of the works on site.
3. Do not scale from this drawing.

T01	31.05.23	MK	AC	WIP - Tender Issue
Rev	Date	By	Chkd	Description

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Project Title
325 Deansgate

Drawing Title
Cross Sections - Sheet 1

Project No
22244

Scale:
1 : 150 [A1]

Drawn By
MK/SP

Date
February 2023

Drawing Suitability
S0 - Initial Issue

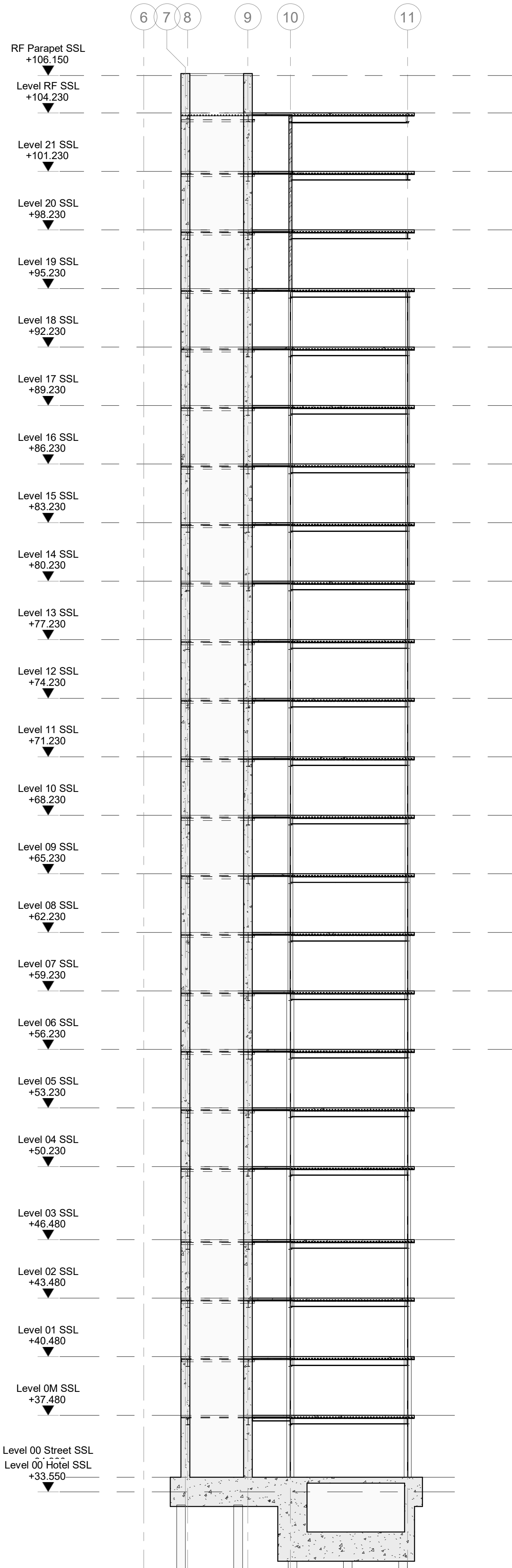
Ver

Drawing Number
DEA-EOC-XX-ZZ-DR-S-2010

Rev
T01

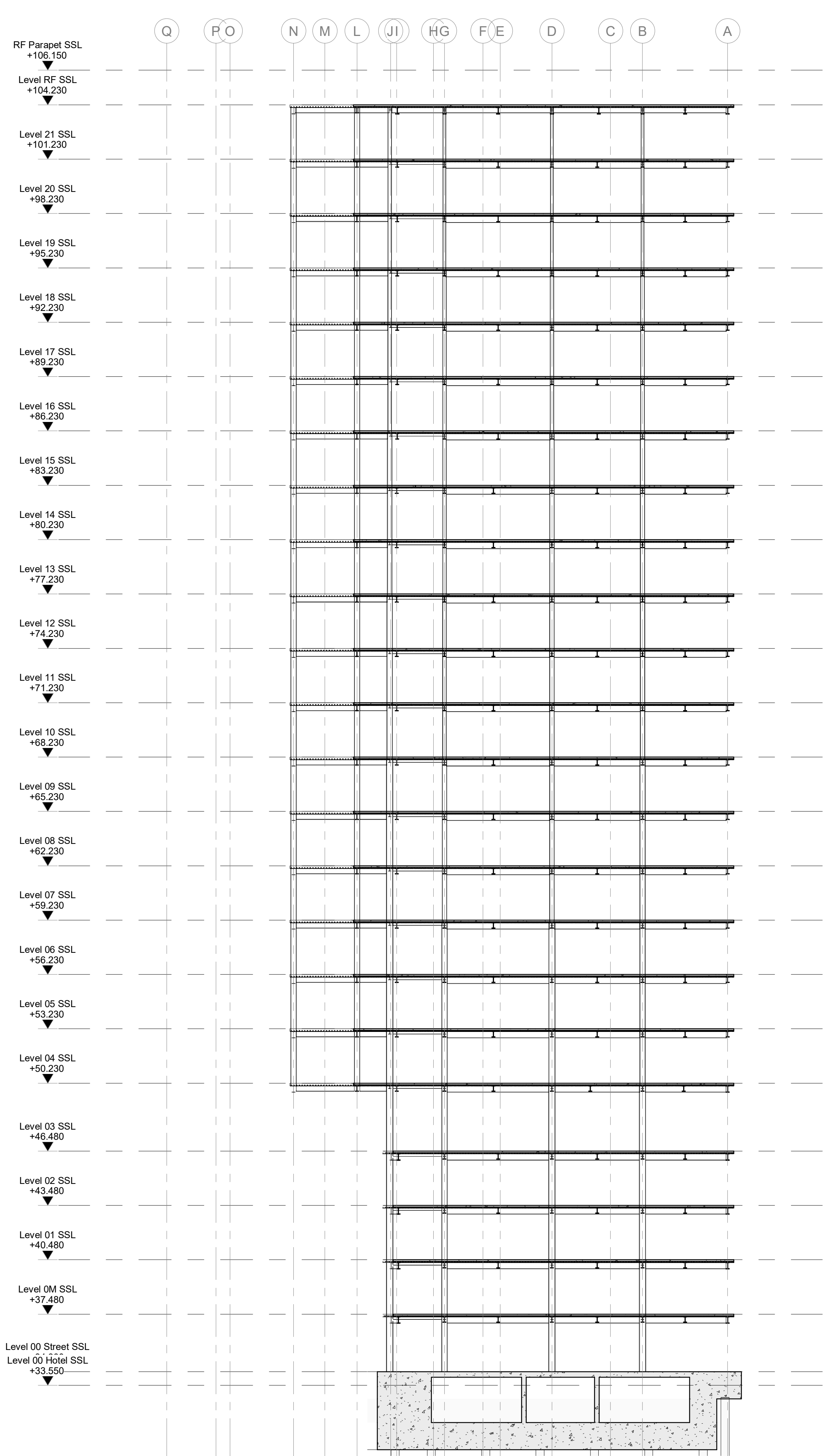
A Cross Section
1 : 150

B Cross Section
1 : 150



C Cross Section

1 : 150



D Cross Section

1 : 150

General Notes

1. This drawing is to be read in conjunction with all relevant Architects & Engineers drawings & specifications.
2. The Contractor is to be responsible for all dimensions & for the correct setting out of the works on site.
3. Do not scale from this drawing.

T01	31.05.23	MK	AC	WIP - Tender Issue
Rev	Date	By	Chkd	Description

**Eckersley
O'Callaghan**

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Project Title
325 Deansgate

Drawing Title
Cross Sections - Sheet 2

Project No
22244

Scale:
1 : 150 [A1]

Drawn By
MK/SP

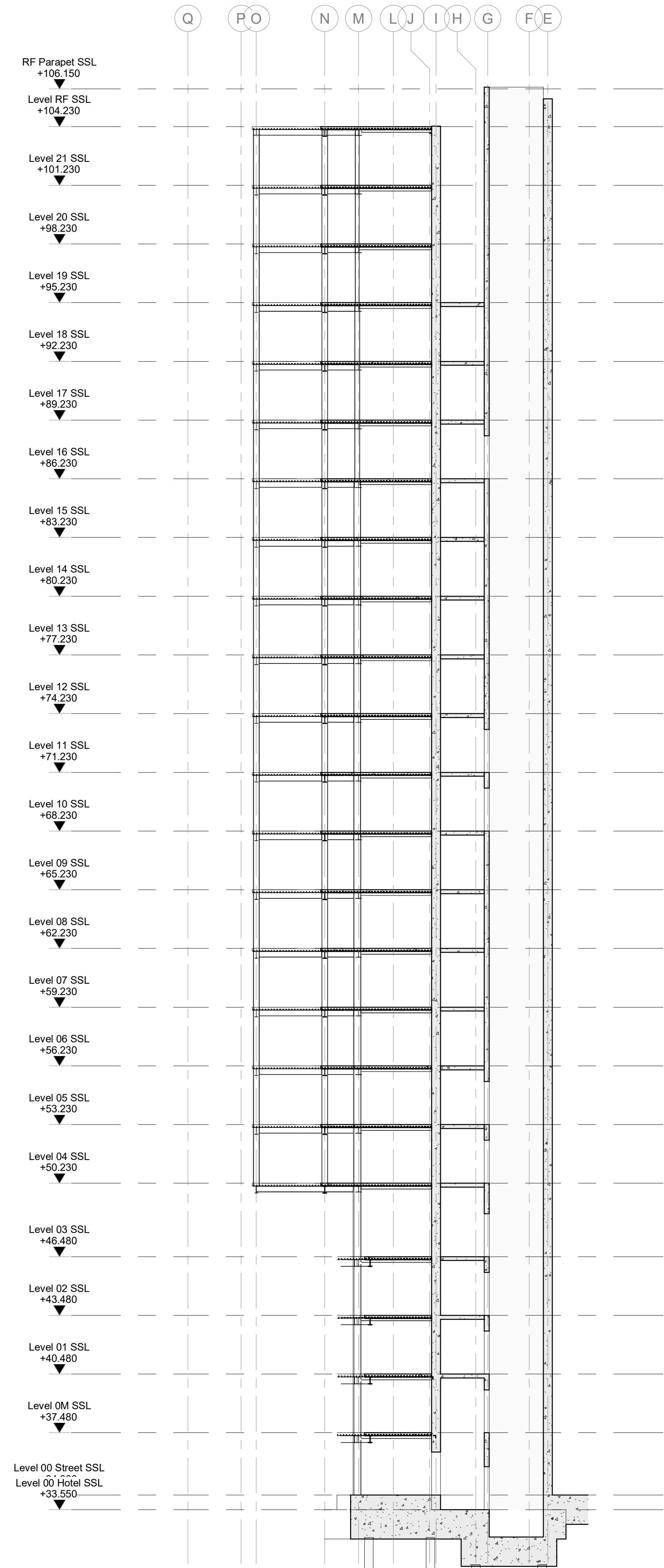
Date
February 2023

Drawing Suitability
S0 - Initial Issue

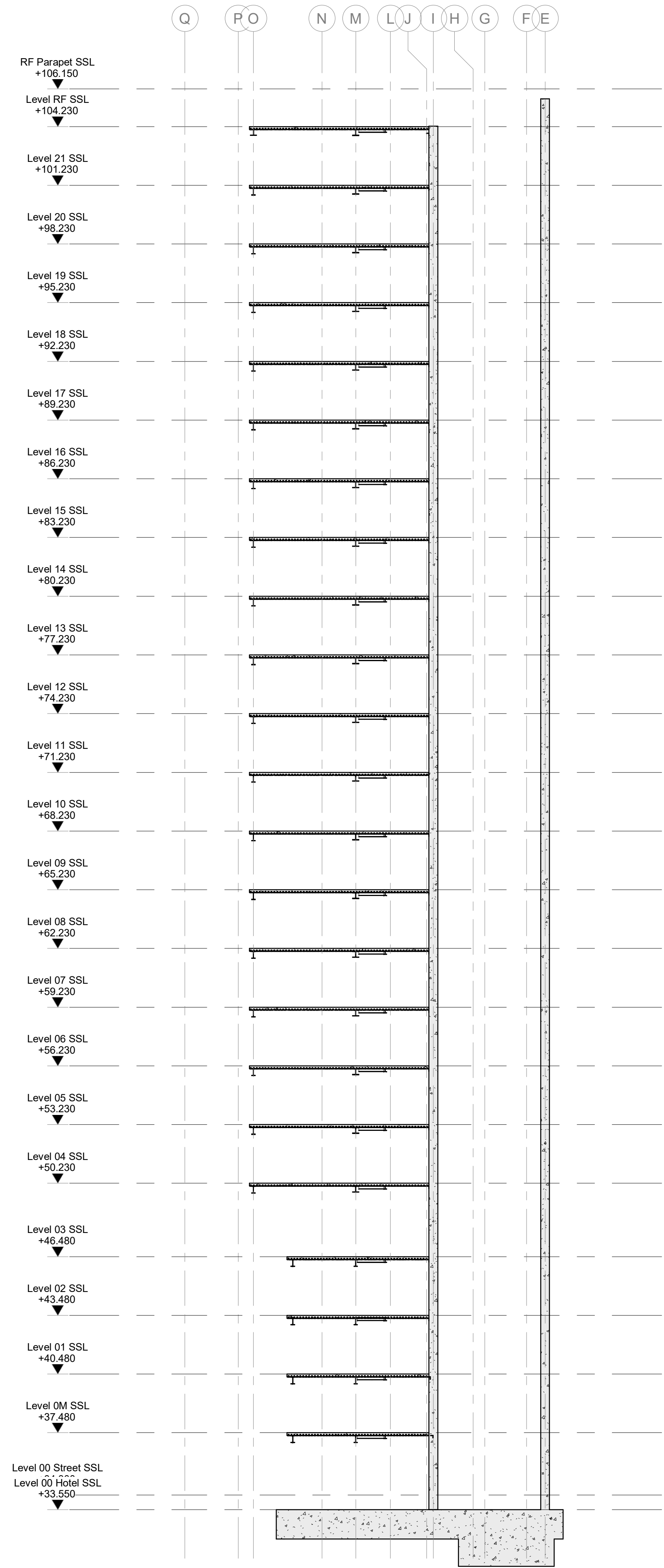
Ver

Drawing Number
DEA-EOC-XX-ZZ-DR-S-2020

Rev
T01



E Cross Section
1 : 150



F Cross Section
1 : 150

- General Notes**
1. This drawing is to be read in conjunction with all relevant Architects & Engineers drawings & specifications.
 2. The Contractor is to be responsible for all dimensions & for the correct setting out of the works on site.
 3. Do not scale from this drawing.

T01	31.05.23	MK	AC	WIP - Tender Issue	
Rev	Date	By	Chkd	Description	

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Project Title
325 Deansgate

Drawing Title
Cross Sections - Sheet 3

Project No
22244

Scale:
1 : 150 [A1]

Drawn By
MK/SP

Date
February 2023

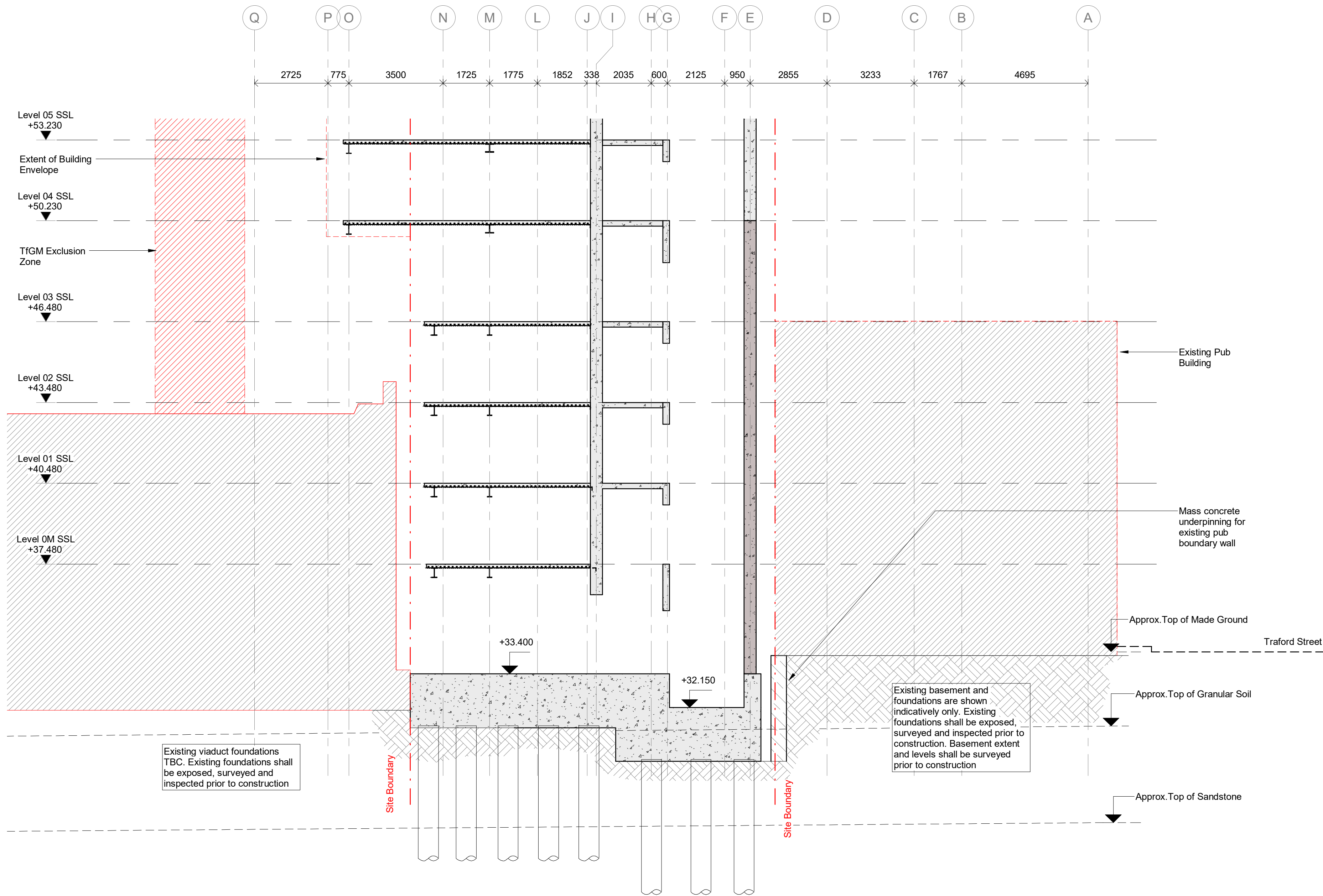
Drawing Suitability
S0 - Initial Issue

Ver

Drawing Number
DEA-EOC-XX-ZZ-DR-S-2030

Rev
T01

- General Notes**
1. This drawing is to be read in conjunction with all relevant Architects & Engineers drawings & specifications.
 2. The Contractor is to be responsible for all dimensions & for the correct setting out of the works on site.
 3. Do not scale from this drawing.



T01	16.06.23	MK	AC	WIP - Tender Issue
Rev	Date	By	Chkd	Description

**Eckersley
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Project Title
325 Deansgate

Drawing Title
Site Constrains
Cross Section 01

Project No
22244

Scale:
1 : 100 [A1]

Drawn By
MK

Date
May 2023

Drawing Suitability
S1 - Suitable for Coordination

Ver

Drawing Number
DEA-EOC-XX-ZZ-DR-S-2500

Rev
T01