Rochdale Road 2

Structural Report- Stage 2 Report



boothking

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This document uses revision codes in accordance with ISO EN 19650:

P: Preliminary (non-contractual) - review, comment or approval.
C: Contractual - Approved for stage completion.

This document uses status codes in accordance with ISO EN 19650:

Work in progress
S0: WIP

Shared (non-contractual)
S1: Coordination
S2: Information
S3: Review
S4 & S5: Approval

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A1, **An**, etc. (where "n" relates to the project stage)

This document uses project stages in accordance with the IStructE Structural Plan of Work 2020:

2: Concept
3: Coordination
4: Technical Design
4.5 Production Design
5: Construction
6: Handover

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1. Introduction

Booth King Partnership Ltd are the Structural and Civil Engineering Consultants for McGoff Projects Ltd., for their new residential development at 85 Rochdale Road, Manchester.

The purpose of this report is to describe the structural engineering work undertaken to the end of RIBA stage 2. Work stage 2 is the preparation of concept design information to meet the project brief. At this stage a contingency assessment of 20-25% is normally considered appropriate.

Booth King Partnership have prepared a structural concept design, defining the scope, scale and form of the structure and have integrated with the other disciplines.

We have procured surveys, and reviewed survey information provided and provided survey scopes.

We have developed, reviewed and assessed structural options and some of these are presented in this report.

This report will define the structural standards and criteria to be used in the design, including:

- Loading
- Durability & Design Life
- Fire resistance (in relation to the fire strategy)
- Ground movements
- Thermal movements
- Serviceability criteria
- Embodied carbon targets

We have worked with the other consultants to develop structural grids and structural zone and we have developed a foundation strategy.

This section of the report will outline:

- The site constraints
- The geotechnical conditions
- The structural alternatives
- The recommended structural solution
- The drainage options being considered

The concept design, once accepted by the client, will be developed in more detail with the design team in the following RIBA work stages.



Figure 1 Jon Matthews Architects rendering of proposed Building

2. The Brief

The brief is for the erection of a 17 storey residential apartment building (Use Class C3 (a), with associated access, amenity, landscaping, public realm, infrastructure and other associated works which forms Phase 2 part of the wider Rochdale Road masterplan. The existing vacant building on the site, comprising of ground floor retail and an apartment on the first floor will be demolished as part of the proposals. The building floorplates are approximately 809m², with approximate 5m grids although this varies. The building has a central core with 2 lift shafts, 2 staircases and areas designated for service risers.The roof top plant is all shielded by the main precast concrete elevations.

The structural drivers to respond to the brief include;

- Economy and efficiency-- Even though Rochdale Road, Manchester is a high value city centre site, the structural solution must be economical.
- Quality-The building is required to be attractive to premium tenants
- Clear span, open plan floor plates- the space provided must be flexible in terms of arrangement.
- Speed of construction - coupled with economy, speed of construction and offsite fabrication is beneficial
- Maximising net floor area by minimising column intrusions into the floor plate.

For a detailed description of the brief and architectural response, refer to the architectural section of Stage 2 report.

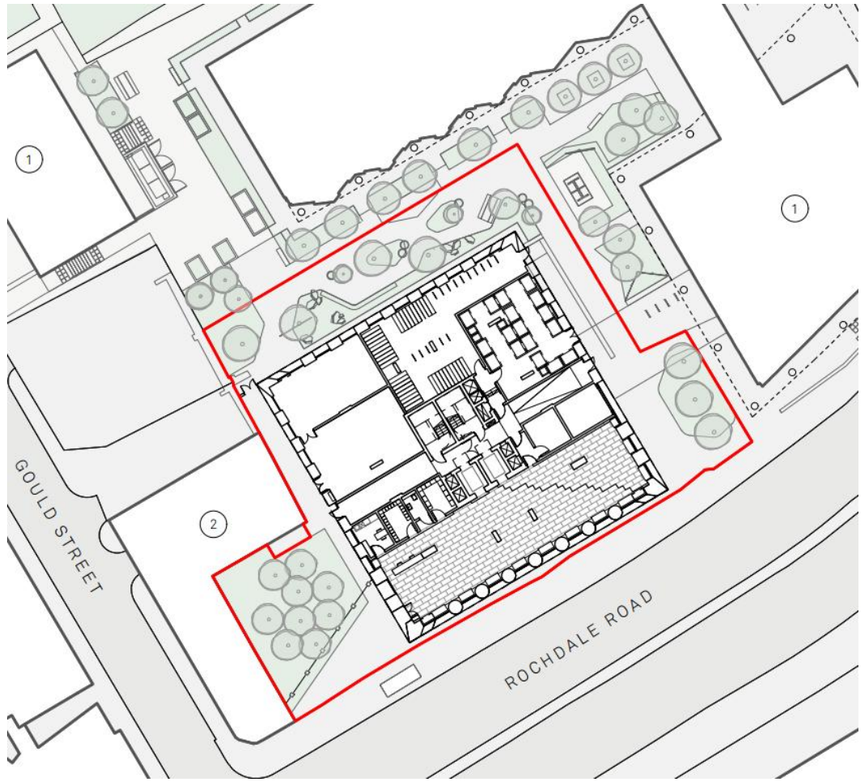


Figure 2 Site Layout

3. The Site

3.1. Constraints

The site is located at 85 Rochdale Rd A664, Manchester, bounded by Gould Street to the West and rest of Phase 1 to the North and East.

Location	Constraint
A664 Rochdale Road	The A664 is a main arterial road. This will remain open during construction although it's intended to use a construction bay during construction and therefore will be necessary to close a lane. A survey has been carried out for buried services and a drainage CCTV survey of the local sewer network and existing drainage has been completed
Marble Arch Inn	The Marble Arch Inn is located at this location. The building is adjacent to the site to the west so special attention and monitoring will be required to keep the building suitable and functioning during construction.
85 Rochdale Rd.	85 Rochdale Road is an existing building located to the south-east of the development site, which is proposed to be demolished. The building will be inspected prior to demolition to identify any specific implications for the proposed works. North of it is the new development that was originally built during Phase 1.
Site	The site is located between the Marble Arch Inn and the existing building. There was a surface level car park on the site. The plan is to develop the whole site. The existing vacant retail building on the site, comprising of retail on the ground floor and an apartment on the first floor will be demolished. The River Irk flows 500 m. to the North of the site. A combined water sewer runs to the south along Rochdale Road where Phase 1 is connected. A flood risk assessment has been prepared by Booth King and submitted as part of the planning application.

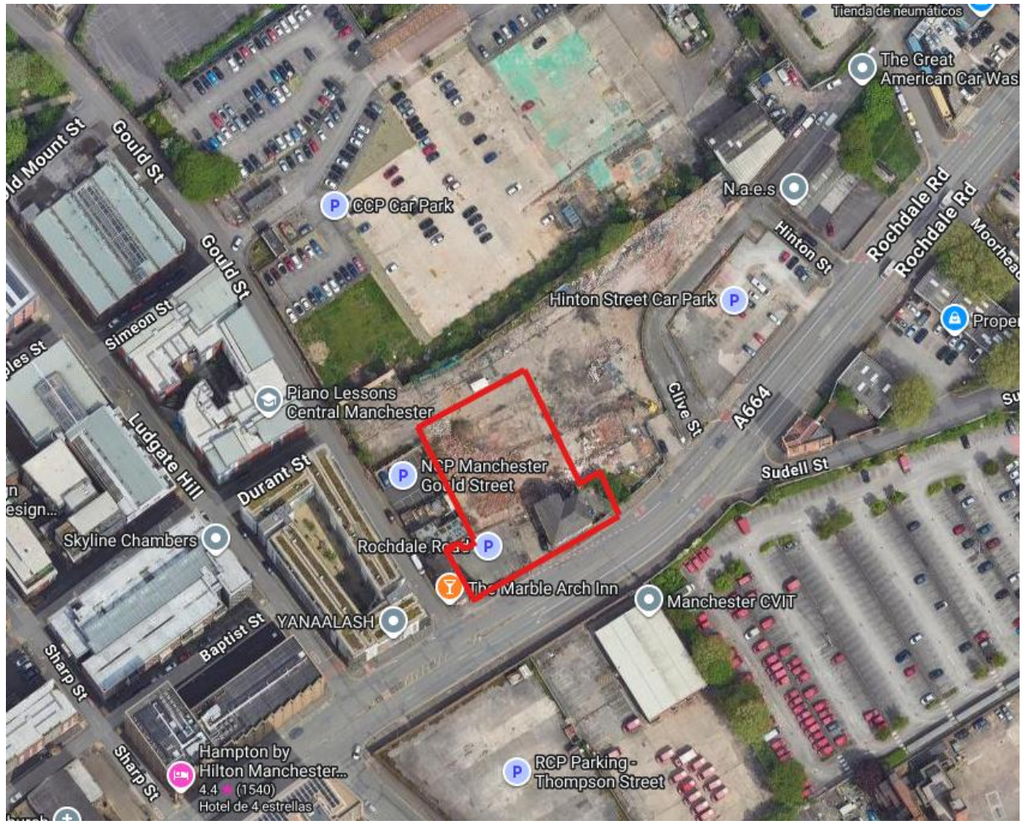


Figure 3 Site Location (Google Maps) Nearest Postcode M4 4HY ; OS E 384689, N 399097

3.2. Geotechnical Considerations

A Phase 1 desk study and a Phase 2 intrusive geotechnical investigation have been carried out by LK Group.

LK Phase 1SI Report

The salient points from the report include;

- Previous land use identified as residential until 1970, historic gas works, depot/storage use from 1970s to 2016 and a small car park until now.
- No radon, moderate risk of hazardous ground gas, further gas monitoring will be required.
- Flood risk zone 1 refer to flood risk assessment for further details.
- Low risk of groundwater flooding on site. No evidence founded.
- Ground conditions identified in previous SI carried out in wider Phase 2 with borehole logs state made Ground with depths 0.9 to 3.8 m bgl. Superficial deposits encountered as firm to stiff gravelly sandy clay and bedrock encountered at 18.5 – 36 m. bgl.
- Obstructions can be found due to possible former basements / structures from historic gas works
- Bored piles are the likely foundation solution. Based on the proposed structure the piles will need to be socketed into the sandstone bedrock at depths circa 18.5m – 36.0m
- A UXO desk study & risk assessment was completed in Sept 2022 by EOD Contracts Ltd for this site and rated the risk as low
- Excavations in made ground likely to be unstable
- The site is not designated contaminated in registers.
- Contaminated land planning conditions are likely to be applied to any planning consent and will require, detailed investigations, risk assessment, remediation strategy, implementation, and validation.
- To address potential pollutant linkages a phase 2 site investigation was required.

Groundtech Consulting Phase 2 SI Report

A phase 2 investigation has previously been undertaken by Groundtech consulting as part of a larger site investigation (Ref: GRO-22292-3965, November 2022), which included the LKC study site.

The investigation comprised 10 boreholes and 23 trial pits

The salient features of the Groundtech Consulting report are;

- Made ground was present within all WS and TP locations within the LKC study area to depths between 0.90-3.80mbgl and comprised horizons of gravel, sand, silt and clay with anthropogenic material including ash, brick, clinker, wood, concrete, glass, ceramic, plastic and coal. The base of made ground within the TP locations was not found so the full extent of the made ground in these areas is unknown. Ground is identified as made ground, stone, clay and sand to circa 3.65m bgl with sand and Ballast to depths circa 7.0m bgl. Bed rock Bunter Sandstone between 7.0m – 11.25m bgl.
- A concrete obstruction was encountered within TP104 at 0.40mbgl. No superficial deposits were found within any of the TPs Ground water encountered but limited to seepage at the base of the made ground
- Elevated concentration of contamination were not recorded within the two samples collected within the LKC study area. However, coverage within this area is very limited. Elevated concentrations of metals, cyanide, TPH, PAHs and phenols were recorded within soil samples collected to the north of the LKC study area boundary. Buried concrete DS1 & AC-1
- No bedrock was encountered within the LKC study area. The wider site encountered red weathered sandstone bedrock at depths between 18.50-36.00mbgl. Ground gas characteristic situation not confirmed.
- No groundwater was encountered within the LKC study area.

The above points are broadly in agreement with LK phase 1 report.

LK Phase 2 SI Report

Intrusive Phase 2 SI undertaken 24–28 June 2025 (6 × WS, 1 × CP with rotary follow-on), plus ground-gas monitoring and laboratory testing.

<u>Ground model</u>

- Made Ground: ~0.05–4.9 m bgl (variable; crushed fill in compound area).
- Glacial till (clay): to ~23 m bgl.
- Dense granular horizon: to ~26.5 m bgl.
- Sandstone bedrock: ~26.5–37.5 m bgl.
- Hydrogeology: no groundwater encountered; soils effectively impermeable (failed falling-head tests).

<u>Geotechnical parameters</u>

- Clay undrained shear strength su ≈ 141 kPa (stiff–very stiff; 4–9 m bgl).
- Sandstone UCS ≈ 8 MPa.

<u>Concrete classification</u>

- DS-1 / AC-1 overall (one isolated DS-2 / AC-2 result; 20% rule ⇒ DS-1 / AC-1).

<u>Contamination & gas</u>

- Elevated benzo(a)pyrene (WS104/105) and lead (WS101); asbestos (chrysotile/crocidolite) within Made Ground (compound).
- Risk to future users in soft landscaping = Moderate → remediation required in soft areas.
- Vapours/controlled waters: Low risk (no remediation).
- Ground gas: CS1 → no gas/radon protection required.

<u>Potable water supply</u>

- Undertake UU pipe material assessment at final depths; remediation not anticipated.

Remediation headline

- Environmental cover system in soft landscaping (e.g., 450 mm validated clean soil over break layer/geotextile). Validation to follow LCRM Stage 3.

Design implications / enabling works

- Prepare piling platform (SHW Series 600), plan for obstructions, specify pile testing (static/dynamic), and allow for negative skin friction in design.

Foundation Recommendations

- Ground slabs: Subject to additional SI in the central/northern footprint confirming no voids/organics, a ground-bearing slab is feasible on engineered granular replacement constructed to SHW Series 600, with a target CBR ≥ 5%.
- Piled foundations (main building): Provide CFA or bored cast-in-place piles socketed into the sandstone bedrock. Allow for obstructions within Made Ground and negative skin friction. An appropriate static load test regime (with integrity testing) is recommended to confirm design assumptions and working capacities.
- Piling Risk Assessment (PRA): Complete a PRA to select the most suitable pile type and mitigate risks to the underlying Secondary A and Principal Aquifers (e.g., control of arisings, casing/grouting methods, and protection measures).
- Working platform: Install a piling mat designed and certified in accordance with BRE 470 – Working Platforms for Tracked Plant. The on-site stockpile of crushed and graded demolition arisings may be used for this platform subject to compliance testing and approval.

Hardstanding Design

- A design CBR of 2% should be adopted for new hardstanding constructed over Made Ground. Where pavements overlie or intercept existing, well-compacted sub-base, a higher CBR in the range of 5–15% may be achievable, subject to in-situ CBR/plate-bearing testing. Formation should be prepared as engineered granular replacement to SHW Series 600 with a separator geotextile where required.

Coal Mining

- Site is not within a high development risk area. No further assessment required.

UXO

- A UXO desk study report was undertaken prior to the start of the previous phase 2 site investigation by EOD Contracts Limited (Ref: EOD/22/22411/DTS/GROUNDTECH CONSULTING/87a Rochdale Road, Manchester, M4 4HY, dated September 2022), the risk was given as LOW, the key findings and key actions are summarised below:
- Key findings:
  - No recorded incidents of site being bombarded during WW1.
  - The site itself was fully utilised throughout WW2 and would have been occupied throughout this period.
  - The site area has been the subject of several phases of construction works post WW2.
- Key actions:
  - UXO safety awareness training should be given to all levels of site personnel and selected individuals on the project staff with relevant responsibilities. It should be reinforced with specific safety briefings and toolbox talks to individuals in conducting intrusive earthworks.

4. Structural Proposals

4.1. Description

The proposed development comprises a 17 storey building, featuring a combination of precast concrete cladding panels and glass curtain walling, with circular concrete columns at ground floor. The elevations incorporate the same precast cladding system, and the column arrangement does not follow a regular grid, although the typical column spacing is approximately 5.5 m.

The principal cladding system is proposed to be designed to be supported at every storey. It consists of precast concrete panels with a brick-faced outer surface, providing the desired aesthetic appearance. The façade also includes large vertical window openings. Further architectural details are provided within the Architect's Stage 2 Report.

Each floor has a typical floor-to-floor height of 3.0 m, although the 1st floor height is over 4m. The roof level has a slightly increased heights to accommodate the proposed blue roof build-up, which provides additional drainage capacity.

The south-west corner of the building lies adjacent to a United Utilities (UU) combined sewer, located approximately 9 m below ground level. Discussions with UU have confirmed a required 3 m easement around this asset. The proposed building doesn't interact with the easement, although ongoing discussions with UU have been positive, with an agreement in principle that the future installation of a steel sheet pile wall along the easement line would be feasible, ensuring no conflicts with the proposed design.

In addition, UU requires that piling works adjacent to their asset be monitored for vibration. Although the proposed piles do not encroach into the easement, they are in close proximity to the sewer. Vibration monitoring will therefore be undertaken during piling operations. Works must be suspended if vibration levels reach 20 mm/s, and UU must be notified if readings approach 15 mm/s, to review potential risks to their assets.

The easement has been agreed with United Utilities to be 3 m; however, the exact location of the sewer still needs to be confirmed. This is a mandatory requirement by UU and must be carried out during the next stage. If the sewer is found to be in the position currently shown on record, there should be no issue. However, if it is confirmed to be closer to the building, the column layout would need to be adjusted accordingly.

The proposed building will be situated between: the grade II listed Marble Arch Inn to the south-west, and Phase 1 Rochdale Road (87 Rochdale Road) which is a new residential scheme which is almost complete. 85 Rochdale Road which is a vacant building comprising of retail on the ground floor and an apartment on the first floor exists on the site, and will be demolished as part of the development proposals and part of the new building will be at this location. The proposed building footprint maintains adequate clearance distance with Marble Arch and during construction, protective measures will be implemented to ensure these existing buildings are not adversely affected by the works.

The building's primary structural system comprises rectangular reinforced concrete columns, contributing to overall stability in both principal directions. Two reinforced concrete cores where are the stairs and lift shafts, which provide the globar stability of the building.

The floor slabs are designed as reinforced concrete flat slabs, creating a monolithic structure that integrates the slabs, columns, and core walls.

Multiple service risers have been identified within the current layout. These are largely fixed at this stage but will be subject to further coordination and confirmation by the M&E Engineer during the next design stage.

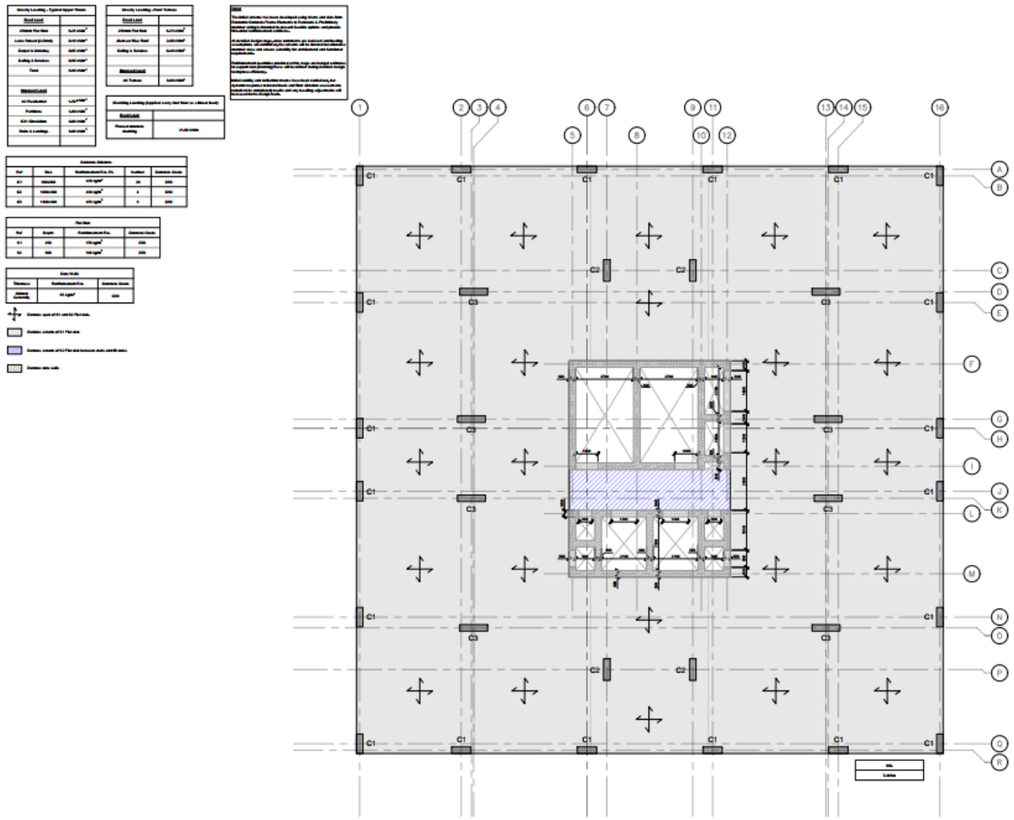


Figure 4 Scheme 1 Schematic floor plan (1st floor)

4.2. Lateral Stability

The structure must have sufficient stiffness to resist lateral loads, which can arise from wind or out of verticality of the structure or on the infrequent occasion in the UK, earthquakes.

For all the schemes under consideration the main lateral load resisting structure is a reinforced concrete core with shear walls around the 2no. stairs and lift shafts.

Core walls are 300mm thick.

Lateral loads are transferred from the cladding to the cores by diaphragm action of the flat slab floor.



Figure 5 View of Structural Model for Scheme with core walls highlighted in blue

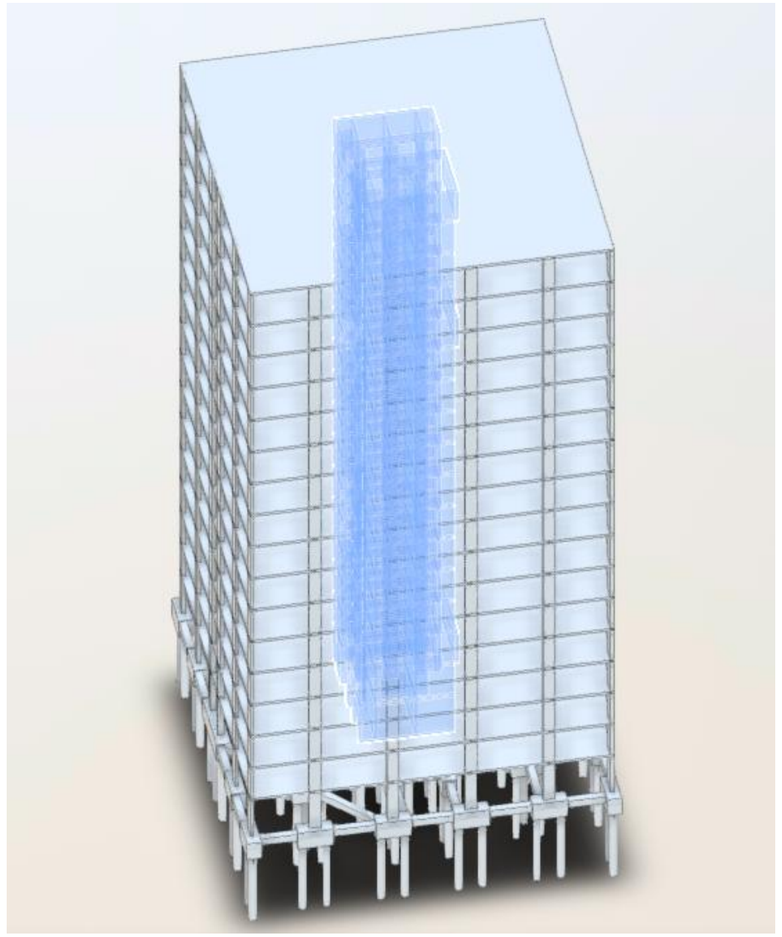


Figure 6 View of Structural Model for Scheme with core walls highlighted in blue

4.3. Disproportionate Collapse

Approach to Prevention of Disproportionate Collapse

The requirement is that the building shall be constructed such that in the event of an accident the building will not suffer collapse to an extent disproportionate to the cause. According to the approved document, limitations to the floor area lost as a result of an accident, and not considered disproportionate are described in the figure below.

Buildings are classified in terms of the risk to occupants, and measures deemed to provide adequate robustness are tabulated in the approved documents.

The Building is a Class 2B structure, as it is a "residential building greater than 4 storeys but not exceeding 15 storeys".

The building is constructed using an in-situ reinforced concrete monolithic frame, comprising columns, flat slabs, and an in-situ concrete core. The floor diaphragms consist of in-situ flat reinforced concrete slabs integrally connected to the columns, providing overall structural continuity and lateral stability in conjunction with the core.

"For Class 2B buildings, horizontal tying requirements and recommendations for the provision within the structure of vertical tying are given, as is assessment of residual stability and spread of damage, following the removal of a loadbearing element, as defined in Table 10."

"The recommendations are listed in Table 11."

This building will be designed with horizontal and vertical ties within the frames, slab to column designed to have a tensile load capacity.

Transfer beams will be considered as key elements and designed for an accidental pressure of 34kN/m^2 laterally on their profile. But at this stage there is not planned to use this type of structure.

Building Class	Recommendations	
Class 1	Provide robustness, interaction of components and containment of spread of damage (see Clause 16).	
Class 2A	As for Class 1, and additionally provide effective anchorage of all suspended floors to walls or effective horizontal ties in accordance with 33.4 and Table 12.	
Class 2B	As for Class 1, and additionally:	
	Option 1 Provide (other than key elements), supporting columns, beams or slabs supporting one or more columns or a loadbearing wall, or loadbearing walls removable, one at a time, without causing collapse.	Option 2 Provide effective horizontal ties in accordance with 33.3 and Table 13, and vertical ties in accordance with 33.5 and Table 12.

Table 1 BS5628:1 TABLE 11 - DETAILED ACCIDENTAL DAMAGE RECOMMENDATIONS

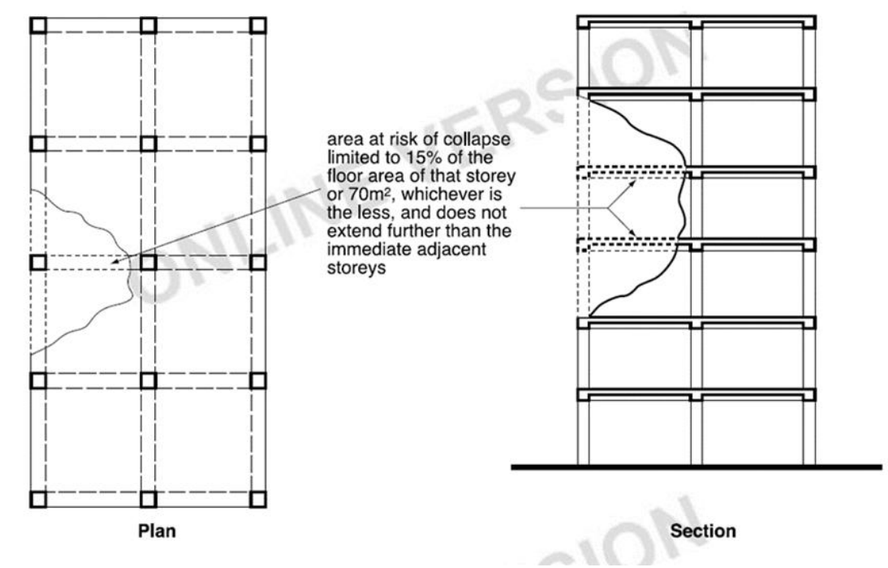


Figure 7 Definition of disproportionate collapse from the Building Regulations Approved Document A

4.4. Design Parameters

In this section we will describe the design parameters which have been used to arrive at the concept design;

- The design codes
- Permanent and Variable Actions
- Serviceability performance criteria, eg deflection limits and vibration

Design Codes

The following codes of practice have been used in the design.
Dead loads will be based upon elemental self-weights of beams, slabs and finishes
Imposed loads will be appropriate as per the building use.
The site is in a sheltered urban location for the calculation of wind and snow loads.
As a minimum the building structure will comply with the Building Regulations and the relevant design standards, particularly but not limited to:

Standard	Title
BS EN 1991-1-:2002	Eurocode 1 Action on structures Part 1-1: General actions – Densities, self weight, imposed loads for buildings.
BS EN 1991-1-4:2002	Eurocode 1 Actions on structures – Part 1-4 General actions - Wind actions.
BS EN 1992-1-1:2004 + A1:2014	Eurocode 2 Design of concrete structures Part 1-1 : General rules and rules for buildings
BS EN 1993-1-1:2005	Eurocode 3 Design of steel structures Part 1-1: General rules and rules for buildings.
BS EN 1993-1-5:2006	Eurocode 3 Design of steel structures Part 1-5: Plated structural elements.

Table 2 Eurocodes of Practice

The Mechanical and Electrical Engineers will be required to confirm their loading requirements during Stage 3-4.

Loads

Where the Client has requested specific loadings these will take precedence over the requirements of the British Standards. The loading has been developed from the initial brief and subsequent discussions and is outlined in detail in the following sections.

At this stage, certain assumptions have been made concerning the applied loads, for example cladding weights and finishes.

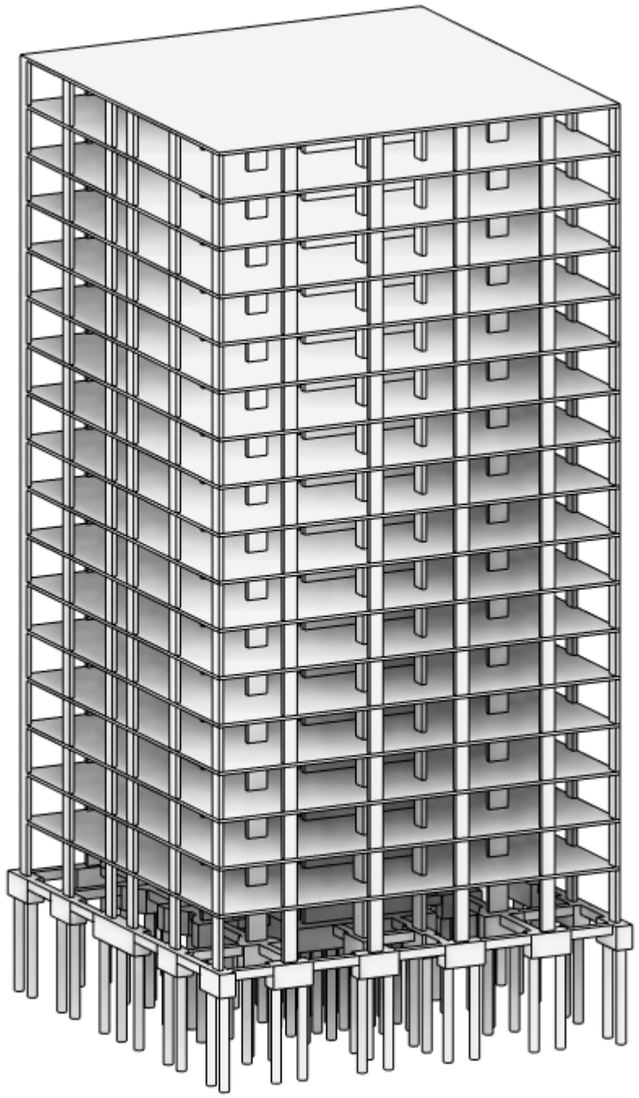


Figure 8 Screen shoot of the propose structure

The Architects will be required to confirm their loading requirements during Stage 3-4.

Wind loads to BS6399-2:1997 (Basic wind speed Vb = 22.50m/s; Max Dynamic pressures qs = 1.32kN/m2, this will reduce subject to the wind direction.

Snow loads to BS EN 1991-1-3 : 2003, but with minimum loading for maintenance access of 0.75kN/m2 Attenuation of rainwater is achieved using Blu-Roof system. Initial advice from the specialist is that the requirement is for 150mm storage and 4 outlets. A load allowance has been made of 1.5kN/m2 to allow for standing water.

BS6399 is the British Standard code of practice for building loads, which is superseded by the Eurocode BS EN 1990 and BS EN 1991, but is still referred to in the Building Regulations Approved document A.

Floors	Dead Load kN/m²	Imposed Load kN/m²
Dead Load:		
250mm Flat Slab	Self-Weight	
Latex Screed (2-5mm)	0.10	
Carpet & Underlay	0.05	
Ceiling & Services	0.50	
TOTAL:	0.65 kN/m^2 + Self-Weight	
Imposed Load:		
A2 Residential		1.50
Partitions		1.00
C31 Circulations		3.00
Stairs & Landings		3.00
Perimeter	Dead Load kN/m	Imposed Load kN/m
Precast cladding	36 kN/m @ every 2nd floor	
Roof Terrace	Dead Load kN/m²	Imposed Load kN/m²
Dead Load:		
250mm Flat Slab	Self-Weight	
Alumasc Blue Roof	2.60	
Ceiling & Services	0.40	
TOTAL:	3.00 kN/m^2 + Self-Weight	
Imposed Load:		
A6 Terrace		3.00

Table 3 Design Loads

4.5. Deflection

The serviceability limits have been designed in accordance with the following;

- Generally, deflections are limited to those recommended in the British Standards as deemed appropriate.
- Imposed Load deflection generally limited to span/360
- Total load deflection generally limited to span/250
- Cantilever deflection generally limited to span/250

4.6. Vibration

Vibrations will be considered referring to the CCIP-016 which is more suitable for concrete structures rather than SCI publication P354 Design of floors for vibration. A response factor of 4 or less will be targeted in the next design stages wherever is possible.

The consideration of vibration in floors is difficult, as the human sensitivity to vibration is variable and subjective. Traditionally in the UK acceptability has been determined by checking that the minimum natural frequency of floor beams is greater than 4Hz. This is an attempt to ensure that the resonant frequency of the floor is not tuned to the frequency of walking (the most common source of excitation in buildings). This approach does not give any information on the resonant response of a floor to excitation.

It does not necessarily follow that a floor designed using these criteria will perform acceptably. The performance of a floor is therefore based upon the statistical likelihood that the vibration of the floor will attract unfavourable comments. This is the approach set out in the SCI publication P354 "Design of Floors for Vibration: A new approach.", (2009).

Given the long spans of the floor slabs and cantilever area in the proposed design, potential vibration will be considered at the next stage.

Loads used for vibration checks

The vibration performance of the floor is influenced by the mass off the floor. For calculation purposes, the mass of the floor is conservatively assumed to be the permanent (dead load) and a proportion of the design imposed load, usually taken as 10%. In our analysis the following loads will be used;

Dead load	kN/m^2
250mm Flat Slab	6.25
Raised floor, ceiling* & services	0.65
Variable Load	
Office (10%)	.25

*No ceiling is in the base spec, but a load allowance has been made for future flexibility

Table 4 Summary Loads for dynamic analysis

Inputs

The frequency of walking is assumed to be 2Hz (The commonly accepted range is 1.8-2.5Hz). The length of the notional corridor is taken as the diagonal length of the area under consideration. This determines the duration of the excitation of the floor.

The damping ratio is assumed to be 3%. This has been shown in research to be consistent with floors fully fitted out and furnished in normal use. During construction, this figure will be much lower (0.5%) and the vibration will be expected to be noticeably higher. Installation of partitions will increase this value and will be beneficial to the vibration performance.

Modulus of elasticity of Steel is taken as 205kN/mm2, Concrete as 38 kN/mm2.

Acceptance Criteria

A fundamental frequency for the floor is calculated from the deflection. For this floor configuration the mode of vibration is taken to be the 'secondary beam' vibration. The modal mass of the floor slab participating in the vibration is calculated, and from this an average acceleration is worked out. This is divided by a baseline figure (0.005m/s2) to give a Response factor. The response factor must not be more than a given multiplying factor.

BS6472 gives a limiting value of the multiplying factor for continuous excitation in residential for day and night giving estimating multiplying factor values between 2 and 4 for daytime and around 1.4 for night.

A vibration dosage value approach is given in BS6472. This considers the duration of the vibration. The limiting value of VDV for buildings for a 16 hour day is 0.2-0.4 to give a low probability of adverse comment

4.7. Fire Resistance

From the building regulations for a building of this height the Fire Resistant period is set at 120minutes. This is to be confirmed by the Fire Engineering Consultant. It is understood that the strategy will be to provide sprinklers.

At this stage steelwork is not planned to be used as part of the main structure, but if it will in further stages, exposed steelwork would be intumescent-painted.

Any flat slab will be designed to be inherently 2 hours FR with reinforcement.

Table 10
Minimum dimensions and axis distances for reinforced concrete slabs

Standard fire resistance		Minimum dimensions (mm)							
		One-way spanning slab	Two-way spanning slab		Flat slab	Ribs in a two-way spanning ribbed slab (b_{min} is the width of the rib)			
			$l_y/l_x \le 1.5$	$1.5 < l_y/l_x \le 2$					
REI 60	h_s =	80	80	80	180	b_{min} =	100	120	≥200
	a =	20	10	15	15	a =	25	15	10
REI 120	h_s =	120	120	120	200	b_{min} =	160	190	≥300
	a =	40	20	25	35	a =	45	40	30
REI 240	h_s =	175	175	175	200	b_{min} =	450	700	—
	a =	65	40	50	50	a =	70	60	

4.8. Frame Option – Flat Slab

In arriving at the concept design the option for flat slab was the first to come up due to the simplicity of construction for this type of building and preference from the contractor and client.

We have considered the overall depth of the floor construction.

Section sizes may vary in the detail design due to changes to our design assumptions for mechanical plant sizes and the weight and fixing details for the cladding. We have allowed for 250mm and 300mm thick flat slab between cores.

The roof has been considered to be loaded as a typical floor with blue roof incorporated.

This option has around 5.5m. spanning reinforced concrete flat slab on column grid lines.

The slab needs to be 250mm deep subject to cladding loads and other factors such as vibration, M&E, etc. which will be further developed during next stage.

The column sizes are planned to vary between the upper and lower floors. The cladding system has not yet been confirmed, but it could either be a traditional brick façade supported at each floor level or precast concrete panels, also supported at each floor level. This approach will help reduce vibration and allow a reduction in slab thickness, particularly in the cantilever areas.

The column base large load is approximately 4170kN with averages of around 3300 kN.

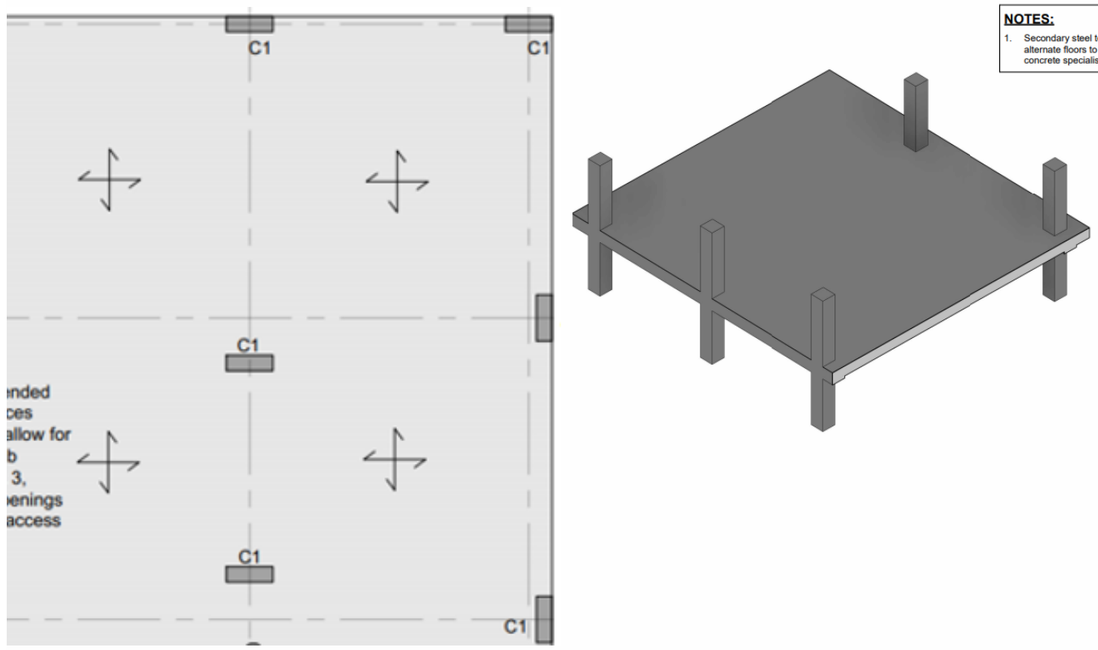


Figure 4 Flat slab

5. Embodied Carbon (CO2e)

This section describes the embodied carbon associated with each structural option proposed in stage 2. Work stage 2 is the preparation of concept design information to meet the project brief. At this stage a contingency assessment of 20-25% is normally considered appropriate.

Booth King Partnership have prepared an embodied carbon report, defining the embodied carbon for each option with a breakdown into each element's contribution to the total carbon. The embodied carbon report is aligned with guidance provided by BS EN 15978, RICS PS 2nd Ed, and PAS 208010.

This report is to be considered for Cradle to construction – (A1-A5) scenarios within the structures Life Cycle Assessment.

This report define**s** the embodied carbon standards and criteria used in the life cycle assessment (LCA) cradle to construction (A1-A5); to help describe the environmental impact, the life cycle is split into stages and modules as defined by BS EN 159785 for buildings and PAS 208010 for infrastructure. The environmental impact this guidance refers to is carbon dioxide equivalent emissions (kgCO2e).

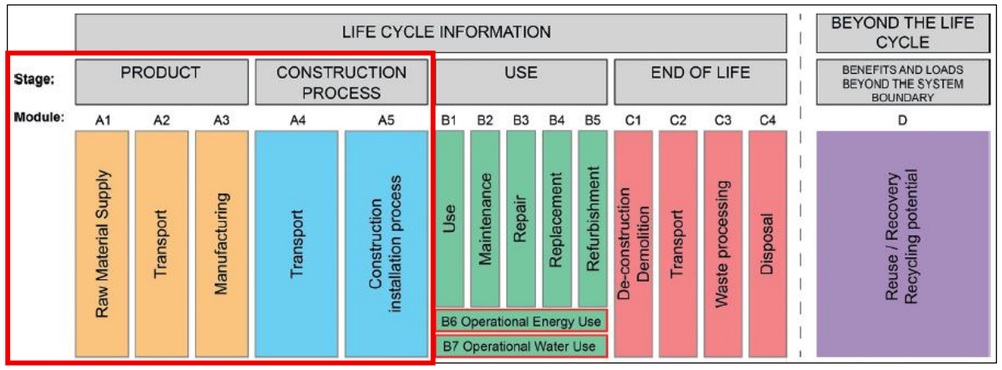


Figure 10

Figure 10 BS EN 159785 Life cycle stages.

There are four key stages to life cycle assessment of a structure:

Product stage (known as 'cradle to gate'). Modules A1–A3. kgCO2e released during extraction, processing, manufacture (including prefabrication of components or elements) and transportation of materials between these processes, until the product leaves the factory gates to be taken to site. Note that recycled content of a product affects the kgCO2e released in Modules A1–A3. Whether it is recycled after its end of life or not, the A1–A3 impact of the project being considered is not affected — this is considered in Module D.

Construction process stage. Modules A4 and A5. kgCO2e released during transport of materials/products to site, energy usage due to activities on site (site huts, machinery use etc.) and the kgCO2e associated with the production, transportation and end of life processing of materials wasted on site.

Use stage. Modules B1–B7. kgCO2e released due to use, maintenance, repair, replacement, refurbishment and operational energy and water while the building is in use. Module B4 (replacement) is often the focus of the use stage when embodied carbon is being considered.

End of life stage. Modules C1–C4. kgCO2e released during decommissioning, stripping out, demolition, deconstruction, transportation of materials away from the site, waste processing and disposal of materials.

There is one additional module beyond the life cycle of the asset that is intended to provide a broader view of its environmental impacts, Module D: benefits and loads beyond the system boundary. This estimates any net kgCO2e benefits or loads beyond the project's life cycle associated with:

- Recycling of materials, e.g. use of scrap steel (rather than virgin iron) in steelmaking on future projects.
- Energy recovered from materials, e.g. energy generated by incinerating timber products.
- Full reuse of materials/products.

The superstructure frames proposed herein provide several opportunities to reduce the carbon intensity of the project during technical design (Stage 3-4). Key carbon reduction opportunities include:

Optimised section sizes thus reducing overall material volumes. Additional economy imparted to foundation design.

Cement replacement can be implemented into the mix design, utilising waste products from other industries in place of carbon intensive cement.

Use of admixtures to lower the water/cement ratio and thus reduce cement demand to achieve target strength.

Use of admixtures to improve workability in-lieu of higher water content. This in turn, reduces the amount of cement required.

Reuse of existing steel sections for a near zero carbon footprint.

Booth King Partnership Ltd track the embodied carbon of a building structure at all stages of design development as standard for all BIM projects. C02e comparison and continued learning is exercised between design stages.

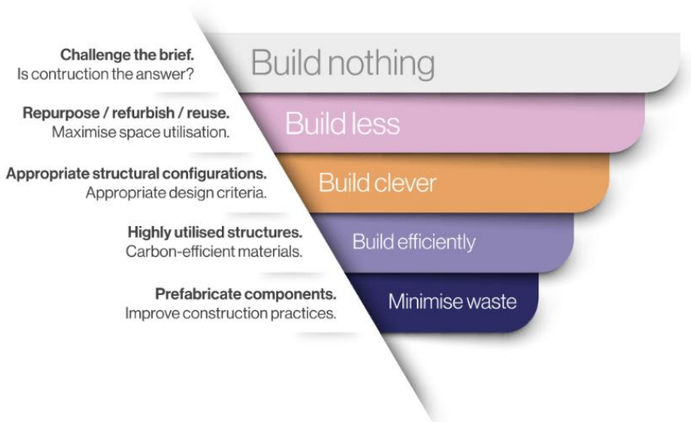


Figure 5 Hierarchy of Sustainable Construction (IStructE)

5.1. Inputs

The calculation is preformed using the IStructE Structural Carbon Tool and volumes of structural material exported directly from the 3D Revit model. Where materials/items are not included in the Tool, relevant data has been obtained from the manufacturer EPD information (appended to the end of this section of the report).

The initial assessment of the CO_2e is based on the partial superstructure design of a typical area of floor plate, as shown in the sketches in the preceding section.

Scheme	Summary
Scheme 1	Reinforced concrete flat slab

The assessment has made allowance for foundations but not for cladding area at this stage.

The following material volumes were exported from Revit as the project moved into Stage 3:

Item	Scheme 1
RC Columns	469 m^3
RC Core Walls	797 m^3
RC Flat Slab`	2,549 m^3
Substructure Beams	49 m^3
Pile Caps	341 m^3
Piles	169 m^3

Assumption have been made for this project information, due to only considered the area of one bay section of the structure.

The Structural Carbon Tool — The Institution of StructuralEngineers

TSCT v3.1 April 2025

Project Information	
Project Number	15286
Project Name	Rochdale Rd
Typology	Residential
Design Stage	Concept
Project Value (£)	£50,000,000
Secondary Functional Unit	
Is this project on an empty site?	Yes

Assumptions	
Average distance to landfill (km)	50
Reinforcement	Steel - Rebar - UK
Percentage excavation removed from site	100%
Soil Density (kg/m^3)	1600
Design life (years)	50

Project specific concrete grades and cement types have been applied.

Figure 12 Extract of material grades used in calculations

5.2. Results

A full breakdown of results is provided at the end of this section, the project achieves the RIBA domestic target (whole building), although doesn't achieves SCORS and LETI - further scope to increase this rating is recommended by BKPL, which may be identified with design development and reduction of uncertainties.

Scheme Rankings

Rank	Scheme	SCORS Rating & A1-A5 Emissions ($kgCO_2e/m^2$)
1st	Scheme 1	C (223)

Figure 13 Summary results table of CO2e for the superstructure schemes 1-5

5.3. Uncertainties

As element design becomes more refined the overall volume of material tends to reduce through design development and the uncertainties, listed below, become further mitigated.

It should be noted that the calculation has not included the the cladding.

- Assumptions have had to be made about material source.
- The calculation currently relies on typical reinforcement density estimates and not the actual designed reinforcement.
- The calculation only considers the primary structure and does not include for any SFS, masonry or other ancillary building materials at this stage.
- The calculation does not take account of any elements which may be additional to the structure (i.e. stair elements).
- Detailing is at an early stage, and additional concrete may be required to facilitate requirements, upstands, steps in ground floor levels, etc.

5.4. Detailed Outputs

Scheme 1

TSCT v3.1 April 2025

Scheme name: Rochdale Rd 2

The Institution of StructuralEngineers

Overall Scheme Information	GIA / Functional Area [m²]			A5.1 - Pre Construction Demolition [kgCO2e/m2]	A5.2 - Construction Activities [kgCo2e/m2]	Embodied Carbon [kgCO2e]			Uncertainty Factor	End of Life Scenario	Secondary Functional Unit
	Demolished	Retained	New			A0	A5.4	B4.2			
			11,586	17.5	20	0	0	0	15%	Good practice	0

Material	Material Type	Material Specification	Structural Element	Description	Component Lifespan [years]	Aspect of Structure	Significant Temporary Works?	Number of Times Temp Works Used before EOL	Volume [m³] or Mass [kg]?	Material Quantity [m³, kg]	Reinforcement [kg/m³]	Element Embodied Carbon A-C [tCO$_2$e]	A1-A3	A4	A5.2 (TW)	A5.3	B4.1	C2	C34.1	C34.2	D1	Biogenic Carbon
Concrete	Insitu	UK C40/50 (25% GGBS)	2.1.1 Frame (vertical) - columns/structural w	Columns	50	New Build	No		Volume [m3]	469	Light Column (100)	213	180	10		11		11	1		13	
Concrete	Insitu	UK C40/50 (25% GGBS)	2.1.1 Frame (vertical) - columns/structural w	Core Walls	50	New Build	No		Volume [m3]	797	Light Column (100)	362	306	17		18		18	2		22	
Concrete	Insitu	UK C40/50 (25% GGBS)	2.2.1 Upper floor and roof - structural slabs	Floor Slabs	50	New Build	No		Volume [m3]	2,549	General Slab (110)	1180	997	58		59		58	8		80	
Concrete	Insitu	UK C32/40 (50% GGBS)	1.1 Foundations (incl. pile caps)	Ground Beams	50	New Build	No		Volume [m3]	49	Ground Beam (230)	28	24	2		1		1	0		4	
Concrete	Insitu	UK C32/40 (50% GGBS)	1.1 Foundations (incl. pile caps)	Pile Caps	50	New Build	No		Volume [m3]	341	Ground Beam (230)	181	149	14		9		8	1		29	
Concrete	Insitu	UK C32/40 (50% GGBS)	1.1. Piling	Piles	50	New Build	No		Volume [m3]	169	Pile (80)	66	56	3		3		4	1		3	
1.1 Excavation-Foundation										895,216		30			30							
1.1 Excavation-Other																						

CO$_2$e

Substructure & Superstructure

	Whole Project	
A0 - A5:	**2,506 tCO$_2$e**	**214 kgCO$_2$e/m²**
Biogenic Carbon:	0 tCO$_2$e	0 kgCO$_2$e/m²
A-C (Including decarbonisation):	**2,618 tCO$_2$e**	**223 kgCO$_2$e/m²**
A-C (Excluding decarbonisation):	2,716 tCO$_2$e	232 kgCO$_2$e/m²
Module D (Including decarbonisation):	86 tCO$_2$e	7 kgCO$_2$e/m²
Module D (Excluding decarbonisation):	173 tCO$_2$e	15 kgCO$_2$e/m²

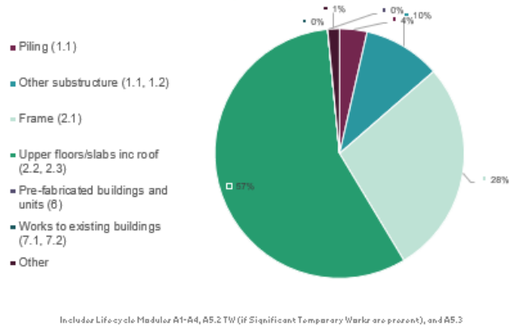
	A0	A5.1	A5.2	A5.4	B4.2	C1
Global [tCO$_2$e]	0	0	261	0	0	70

No uncertainty factor or decarbonisation factor has been applied.

	A	B	C	D	Biogenic Carbon
Total [tCO$_2$e]	2179	0	183	150	0

No uncertainty factor or decarbonisation factor has been applied.

Rochdale Rd 2 - Element emission breakdown [tCO2e]



Includes Life cycle Modules A1-A4, A5.2 TW (if Significant Temporary Works are present), and A5.3

The Structural Carbon Tool was produced by Elliott Wood Partnership Limited in partnership with The Institution of Structural Engineers.

This project scheme releases carbon equivalent to:

2,283 one-way flights from London to New York

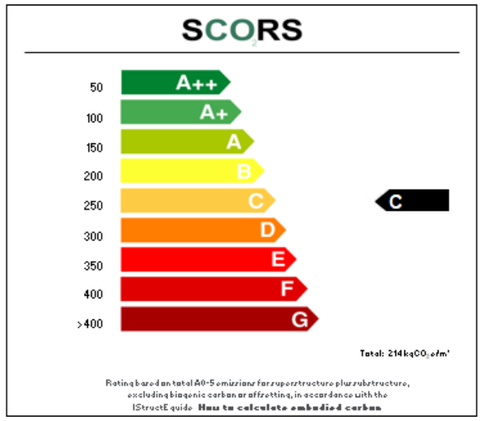
1,794 people's consumption of meat, dairy and beer for 1 year

966 average family cars running for 1 year

This project scheme has a SCORS rating of C

SCORS:	137 $kgCO_2e/m^2$	Scheme does not meet target
RIBA:	301 $kgCO_2e/m^2$	Scheme meets target
LETI:	201 $kgCO_2e/m^2$	Scheme does not meet target

This project scheme has a SCORS rating of C



6. Foundation Proposals

The foundations will be piled. At this stage we have taken pile capacities for bored piles from LK SI Phase 2 report as;

Depth (mbgl)	Pile Carrying Capacity (kN)		
	300mm dia	450mm dia	600mm dia
8	132	224	535
12	227	368	526
16	232	511	718
20	419	655	909

Depth (mbgl)	Pile Carrying Capacity (kN)	
	600mm dia	750mm dia
30	8,400	13,000

Table 5 Tables from LK SI Phase 2 report

These values will have to be confirmed by the specialist piling contractor, and the idea is to use 600mm diameter piles at this stage.

From the initial findings from the geotechnical site investigation we expect the piles to be of the order 20m to 25m long to give a 2.5m to 3m socket into the sandstone.

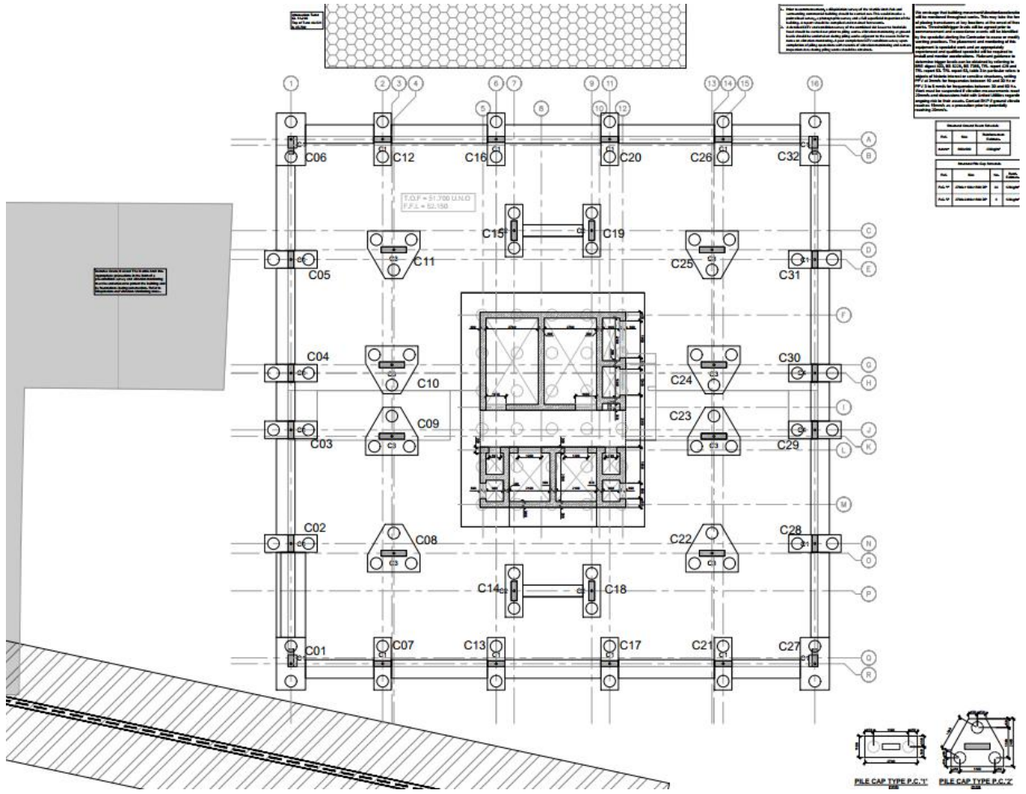


Figure 14 Building 1 footprint with existing pile locations

Based upon the assumptions discussed in the preceding sections we have estimated the total vertical loads on the super structure for the concrete frame option. These are summarised in the table over.

There are 32 perimeter columns and 9 internal columns and 2 reinforced concrete cores.

	Axial load (kN)					
Column	DL	LL	Wind (Compression)	Wind (Tension)	SLS-Char.	ULS-Set(B)
C1	2500	450	60	-90	2950	4050
C2	3000	700	80	-110	3750	5100
C3	2450	550	80	-110	3050	4150
C4	2450	550	80	-110	3050	4150
C5	3000	700	70	-110	3700	5100
C6	2500	450	60	-90	3000	4100
C7	2900	650	90	-100	3600	4900
C8	3950	1150	190	-240	5200	7150
C9	3100	900	300	-330	4150	5750
C10	3100	900	290	-320	4150	5750
C11	4050	1200	160	-200	5350	7400
C12	2950	700	80	-100	3650	5050
C13	2650	600	120	-140	3300	4550
C14	2450	650	270	-280	3250	4500
C15	2600	750	280	-300	3500	4800
C16	2950	700	110	-130	3650	5050
C17	2650	600	120	-140	3300	4550
C18	2450	650	270	-280	3250	4500
C19	2600	750	280	-300	3500	4800
C20	2950	700	110	-130	3650	5050
C21	2900	650	90	-110	3600	4950
C22	3950	1150	200	-240	5200	7200
C23	3100	900	310	-330	4150	5750
C24	3100	900	300	-330	4150	5750
C25	4100	1200	160	-200	5350	7400
C26	2950	700	80	-100	3650	5050
C27	2500	450	70	-90	3000	4100
C28	3000	700	90	-110	3750	5150
C29	2450	550	90	-110	3050	4150
C30	3000	700	90	-110	3750	5150
C31	2500	450	70	-90	2950	4050
C32	2450	550	90	-110	3050	4150

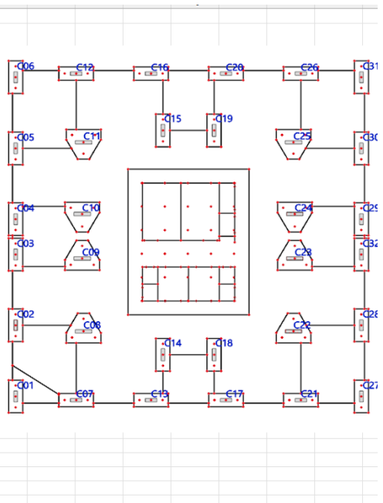


Figure 15 Estimated total loads

Ground floor Slab

If the made ground can be sufficiently compacted in line with a suitable earthworks specification, such as SHW 600 with a confirmatory plate load testing to ensure that the material is compacted to provide a suitable CBR value (minimum 5%), a ground bearing slab will be adopted.

Basement

There are no basements planned in this development.

Retaining Wall

There are no retaining wall planned in this development

7. Adjacent Buildings

Adjacent to the proposed building, there is a grade II listed building — the Marble Arch Inn. On the opposite side, another existing building will be demolished as part of the proposals. The Marble Arch is highlighted in green in Figure 16 below



Figure 16 Buildings retained highlighted in yellow

The Marble Arch building is located approximately 13 m from the proposed development, and at the rear, the distance to the proposed façade line will be around 2 m only. Therefore, a number of protective measures will be required during the works to ensure its stability and preservation.

Steps to protect both buildings:

1. Prior to commencement BKP would recommend a point cloud survey, a photographic survey and a full superficial external visual inspection of the building should be carried out. A report should be compiled and retained on record. If it can get permission, BKP would also recommend a superficial visual inspection of the inside of the pub. This will establish the superficial condition and provide a line and level datum for the building.

2. Additionally, prior to commencement BKP would recommend a detailed CCTV and condition survey of the UU sewer to Rochdale Rd. This passes beneath the corner of Marble Arch and may be vulnerable to heavy impact site activities such as piling. If this sewer becomes damaged by the works, the impact on Marble Arch could be significant and it must use all measures to protect it. Assuming the sewer is initially in good condition then it should be protected by the vibration monitoring as per UU requirements. If it is badly damaged prior to commencement, particularly in the vicinity of the Marble Arch ., then measures may need to be implemented to repair this first.

3. Following a little site enabling work, the first site activity which could have a disruptive effect on adjacent properties will be piling. The piling geometry will be arranged to maximise the gap between the piling line and the Marble Arch walls. Before piling commences BKP would recommend a regime of transducer monitors be installed in key locations on the adjacent walls. The detail of this exercise will be agreed with specialists up front and vibration/ acceleration threshold criteria will be set and linked to the site management systems. This will provide alerts to key personnel informing them when accelerations exceed agreed limits (15 mm/s) and thus will be able to rapidly cease works and inform BKP and UU. BKP would then need to discuss alternative approaches with UU.

4. Early consultation with the piling contractor is anticipated and the most appropriate piling solution taking into account site specific geology will be agreed and adopted.

5. BKP assume a party wall survey will also be put in place and agreed by both parties prior to commencement. This process will help to clarify the decisions for certain structural solutions have been made.

6. On completion of the piling, BKP would recommend a follow-up verticality and superficial visual survey so that can hopefully identify zero new defects to Marble Arch .

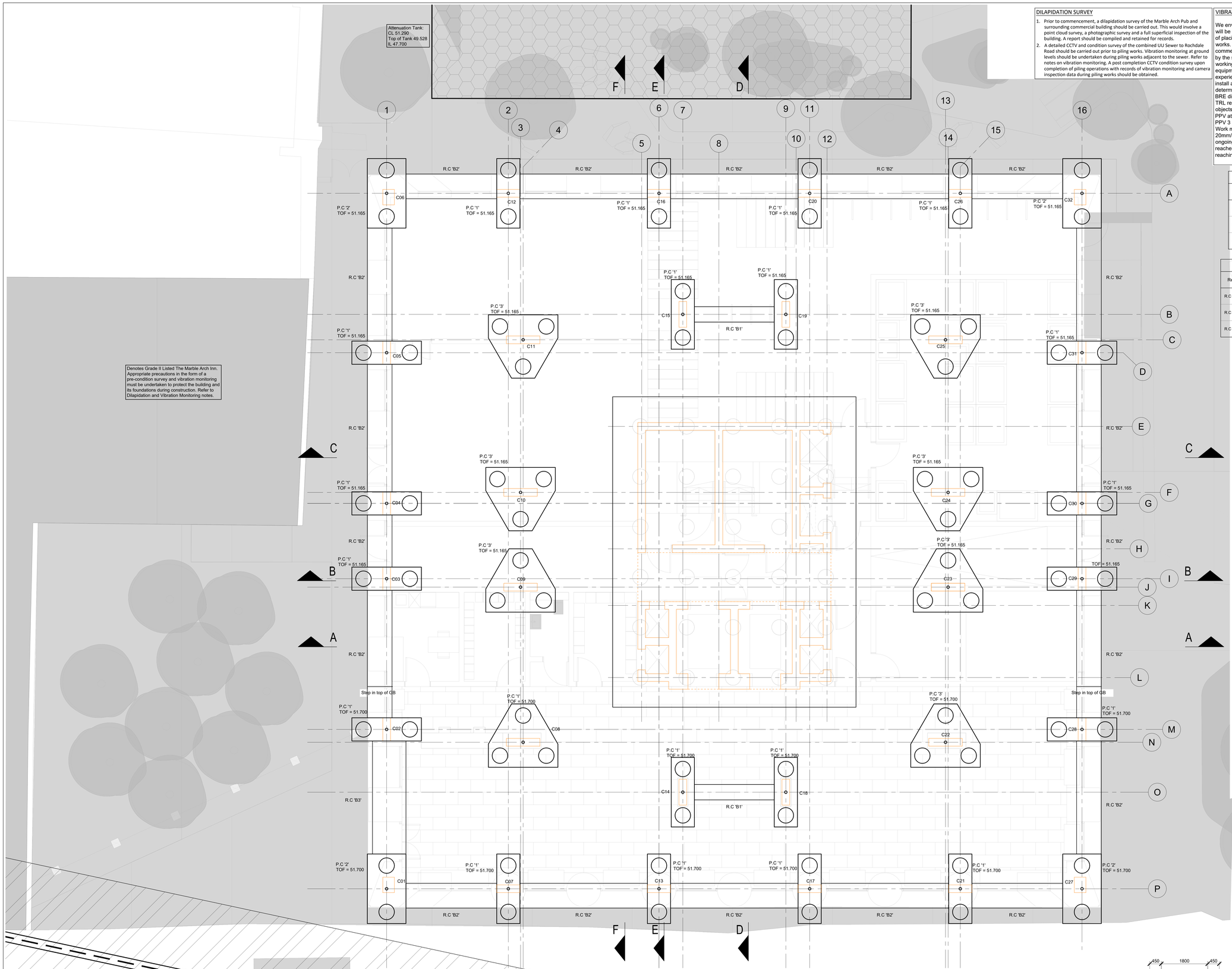
7. Whilst BKP anticipate no defect, in the unlikely event that additional defects are identified, these would be attributable to the piling activity and immediate steps can be implemented to remediate.

8. The whole exercise would be repeated for each sub-contractor and site activity which may put the Marble Arch at risk. Activities which may pose a risk to the Marble Arch include piling, drainage pile cap and ground beam installation. Other activities may also be required which may also pose a risk and these will be considered at a later date.

9. On completion of the contract we recommend a final survey be carried out to demonstrate to the owners of Marble Arch the final situation. In all likelihood and assuming our protection measures are thorough and well implemented that the impact onto the Marble Arch will be negligible.

10. Clearly, the development poses impacts to neighbours such as dust, noise, disruption to traffic to surrounding roads, low-level low-risk vibration from site plant. All of these are normal for building sites and are addressed by good site management.

Appendix A – Structural Drawings



DILAPIDATION SURVEY

1. Prior to commencement, a dilapidation survey of the Marble Arch Pub and surrounding commercial building should be carried out. This would involve a point cloud survey, a photographic survey and a full superficial inspection of the building. A report should be compiled and retained for records.
2. A detailed CCTV and condition survey of the combined UU Sewer to Rochdale Road should be carried out prior to piling works. Vibration monitoring at ground levels should be undertaken during piling works adjacent to the sewer. Refer to notes on vibration monitoring. A post completion CCTV condition survey upon completion of piling operations with records of vibration monitoring and camera inspection data during piling works should be obtained.

VIBRATION MONITORING

We envisage that building movement/vibration/acceleration will be monitored throughout works. This may take the form of placing transducers at key locations at the onset of these works. Threshold/trigger levels will be agreed prior to commencement and exceedance events will be identified by the specialist alerting the Contractor to cease or modify working practices. The placement and monitoring of this equipment is specialist work and an appropriately experienced and qualified specialist will be required to install and monitor accelerations. Relevant guidance to determine trigger levels can be obtained by referring to BRE digest 403, BS 5228, BS 7385, TRL report 429 and TRL report 53. TRL report 53, table 3 in particular refers to objects of historic interest or sensitive structures, setting PPV at 3mm/s for frequencies between 10 and 30 Hz or PPV 3 to 5 mm/s for frequencies between 30 and 60 Hz. Work must be suspended if vibration measurements reach 20mm/s and discussions held with United Utilities regarding ongoing risk to their assets. Contact BKP if ground vibration reaches 15mm/s as a precaution prior to potentially reaching 20mm/s.

Structural Pile Cap Schedule

Ref.	Size	No.	Reinf. Estimate.
P.C '1'	2700x900x1500 DP	20	120kg/m³
P.C '2'	2700x1500x1500 DP	4	120kg/m³
P.C '3'	2700x2460x1500 DP	8	120kg/m³

Structural Ground Beam Schedule

Ref.	Size	No.	Reinforcement Estimate.
R.C 'B1'	600x600	2	230kg/m³
R.C 'B2'	960x600	19	230kg/m³
R.C 'B3'	1300x600	1	230kg/m³

NOTES:

1. Do not scale from this drawing.
2. This drawing is copyright and is sent to you in confidence. It must not be copied, used or disclosed, in whole or in part, to third parties without written permission. It remains the property of Booth King Partnership Ltd. (BKPL) and must be returned on request.
3. This drawing is to be read in conjunction with all relevant contractual documents.
4. Anyone using this drawing must be aware of their legal duties under the CDM Regulations 2015, refer to the HSE website for further information. BKPL are not Principal Designers.
5. All dimensions shown on this drawing are in millimeters unless noted otherwise.
6. If the Contractor consider that they do not have sufficient information to safely complete the works detailed on this drawing, they should contact the Engineer.
7. This document uses revision codes in accordance with ISO EN 19650: **P.** Preliminary (non-contractual) - review, comment or approval. **C.** Contractual - Approved for stage completion.
8. This document uses status codes in accordance with ISO EN 19650: Work in progress: **S0** - WIP Shared (non-contractual): **S1** - Coordination, **S2** - Information, **S3** - Review, **S4** & **S5** - Approval. Published (contractual): **A1**, **An**, etc. (where "n" relates to the project stage)
9. This document uses project stages in accordance with the IStructE Structural Plan of Work 2020: **2** - Concept, **3** - Coordination, **4** - Technical Design, **4.5** - Production Design, **5** - Construction, **6** - Handover.
10. Only documents with a revision code C# (where '#' relates to a revision number) and status code A4 or A5 are suitable for construction. Any deviations to that which is on site is not the liability of BKPL.

PILING NOTES

1. All piles are to be designed by specialist sub-contractor. All works to be in accordance with 'the Institution of Civil Engineers Specification for Piling'.
2. All works to be in accordance with the 'Federation of piling specialists guidance'.
3. For costing purposes assume all piles to be 600mm Ø CFA bearing piles, socketed into the Sandstone bedrock circa 29m bgl.
4. Foundations have been schemed for the following assumed Pile Carrying Capacity.
   Axial Compression = 2800kN per pile
   Horizontal Shear = 20kN per pile
   Pile diameters are assumed to be 600mm.
5. The Piling Contractor is to refer to the Phase 2 Site Investigation Report Ref. LKC251336 September 2025, to advise on achievable Pile Carrying Capacity, depths, and piling solution.
6. To the South-West of the Site, a combined UU Sewer is in close proximity to the site boundary. Sleeved piles upto a depth of 10m should be considered in the design.
7. Piling contractor to allow 2No. piles to be load tested to 1.5 working load.Integrity testing required to 100% of piles.
8. Piling contractor to confirm location of below ground services and culverts with main contractor prior to commencement on site.
9. Agreement to be reached between main contractor and piling contractor with regards to exposure and removal of below-ground obstructions along piling lines.
10. In the tendering process for this contract, piling contractors to be made aware of the particular site constraints and risks associated.
11. Piling may need to be low vibration technique such as rotary bore, not driven pending condition surveys of surrounding buildings. Piling specialist to develop robust method statements and risk assessment to demonstrate how this part of works will proceed without causing damage to surrounding buildings.
12. A piling mat will be required in line with BRE470 Working Platform for Tracked plant.

CONCRETE NOTES

1. All foundations to be in accordance with BS EN1992, Foundations and BS EN 206, Structural use of concrete.
2. All concrete to be in accordance with National Structural Concrete Specification for Building Construction.
3. Formations which are to be left exposed overnight prior to concreting shall receive grade ST3 blinding to BS5328 Part 2 1991.
4. Reinforced concrete foundations to be designated concrete mix RC32/40. Max.aggregate size 20mm.
7. All concrete in contact with the ground to be suitable for use in the following conditions:

   Design Sulphate Class DS-1
   Aggressive Chemical Environment AC-1

8. Refer to Architect's Drawings for Waterproofing Details.
9. Cover to reinforcement to be:
   9.1. 75mm Bottom
   9.2. 40mm Top
   9.3. 40mm Sides
10. Unless noted otherwise laps to be as follows :
   10.1. H10 - Minimum 400mm
   10.2. H12 - Minimum 500mm
   10.3. H16 - Minimum 650mm
   10.4. H20 - Minimum 800mm
   10.5. H25 - Minimum 1000mm

NOTE

For sections refer to BKP drawing 1001

Everything is indicative at this stage and is for costing / discussion

REV.	DATE	REVISION DETAILS	INITIALS
P03	20.03.26	Updated Foundation Arrangement	TB
P02	15.10.25	Updated Foundation Arrangement	RG
P01	02.09.25	2a - Proposed Scheme Design	CW
		CURRENT DRAWING REVISION CHECKED BY	AA
		CURRENT DRAWING REVISION APPROVED BY	IE

DRAWING STATUS: S1

PROJECT STAGE: Stage 2

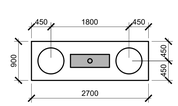
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RAMSBOTTOM Tel: 01706 822 022 | **MANCHESTER** Tel: 0161 694 7087 | **EDINBURGH** Tel: 0131 229 1547

PROJECT: Rochdale Road 2

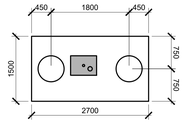
TITLE: Foundation GA Plan

SCALE (A0)	AUTHOR	DATE	REVISION	BKPL No.
1:50	CW	01.09.2025	P03	15286

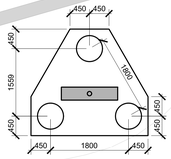
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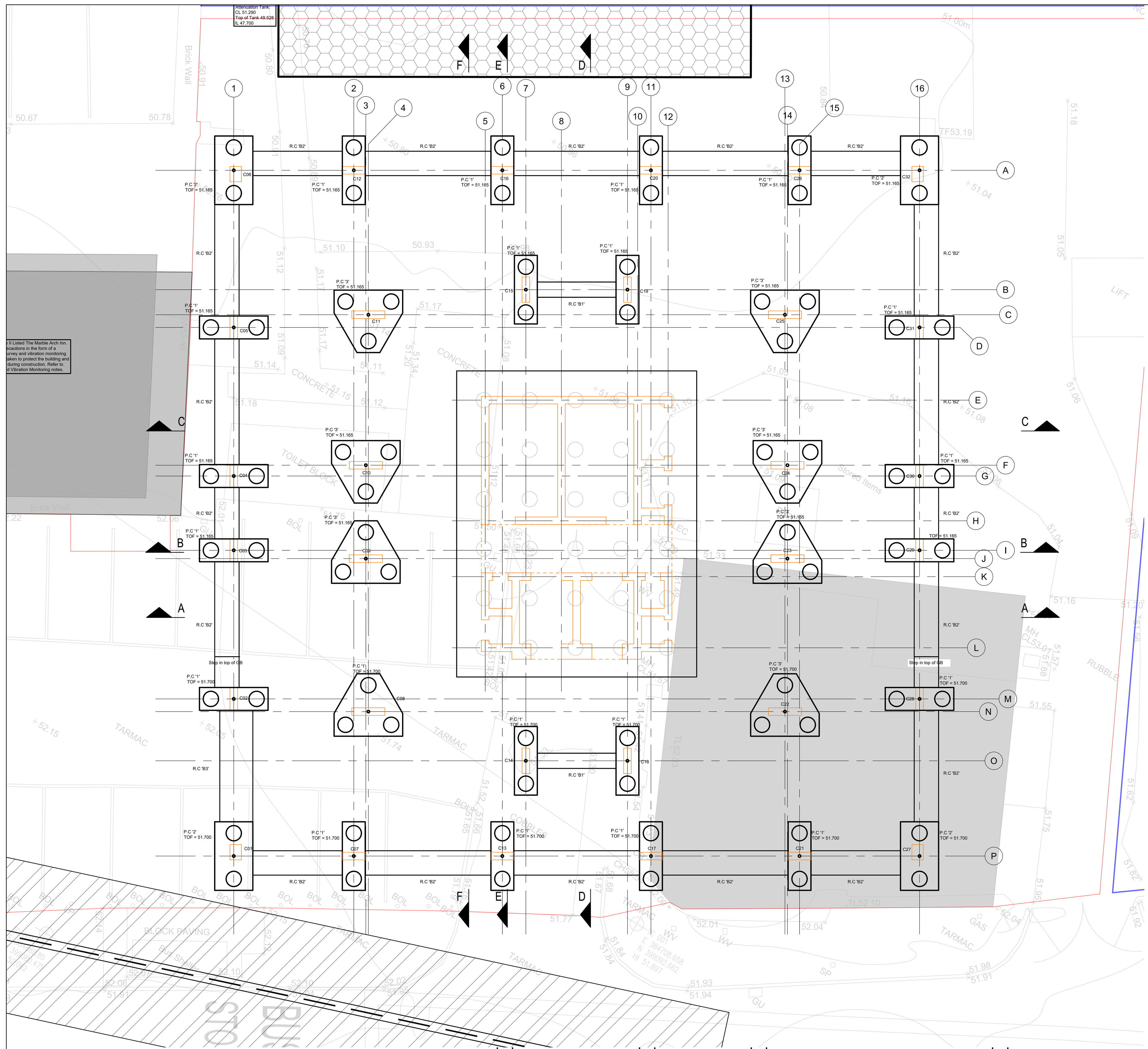
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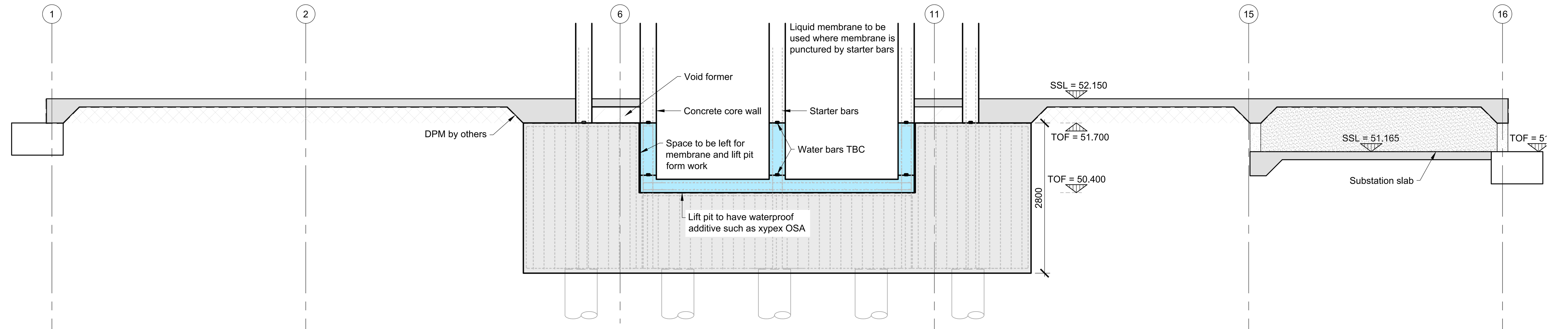


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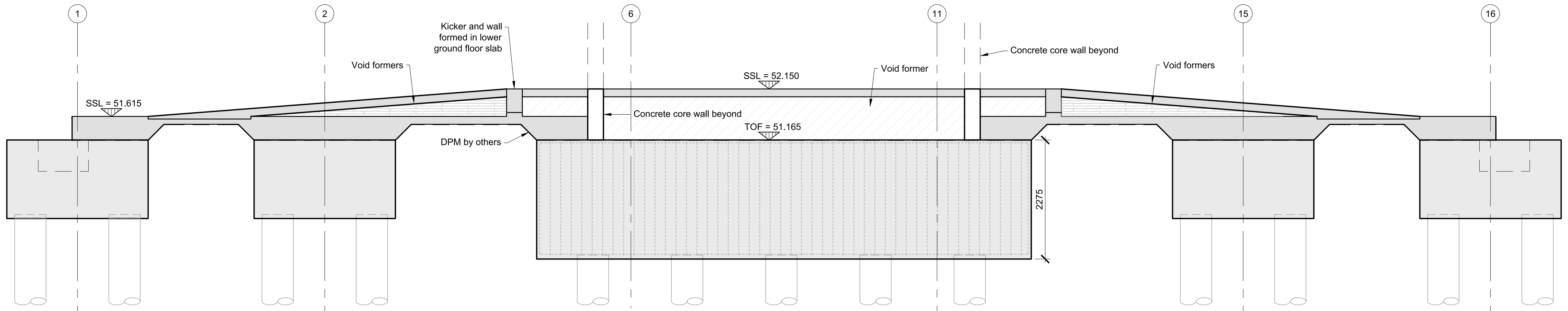


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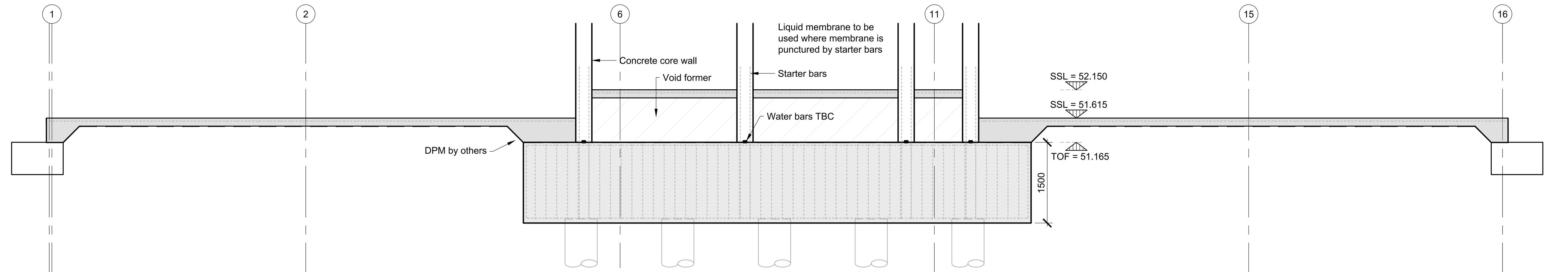




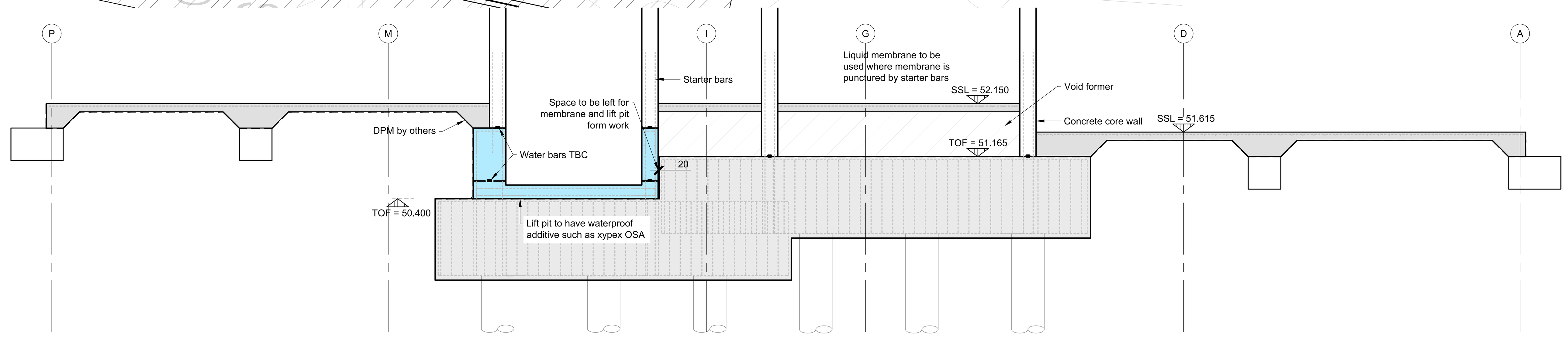
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Scale 1:50



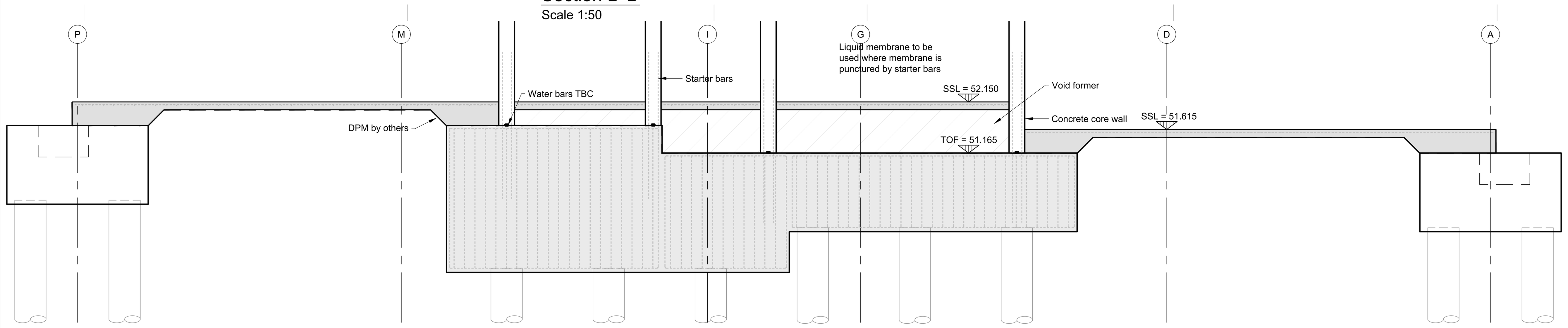
Section B-B
Scale 1:50



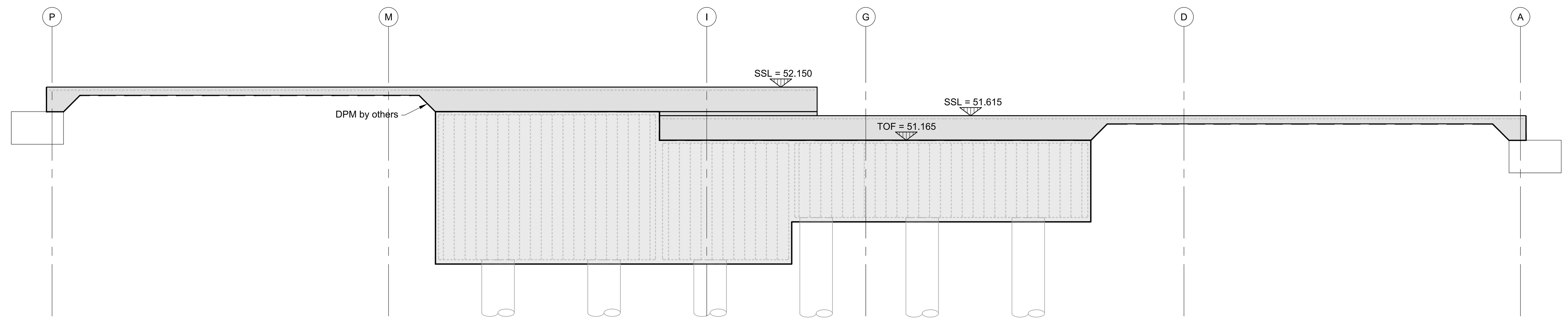
Section C-C
Scale 1:50



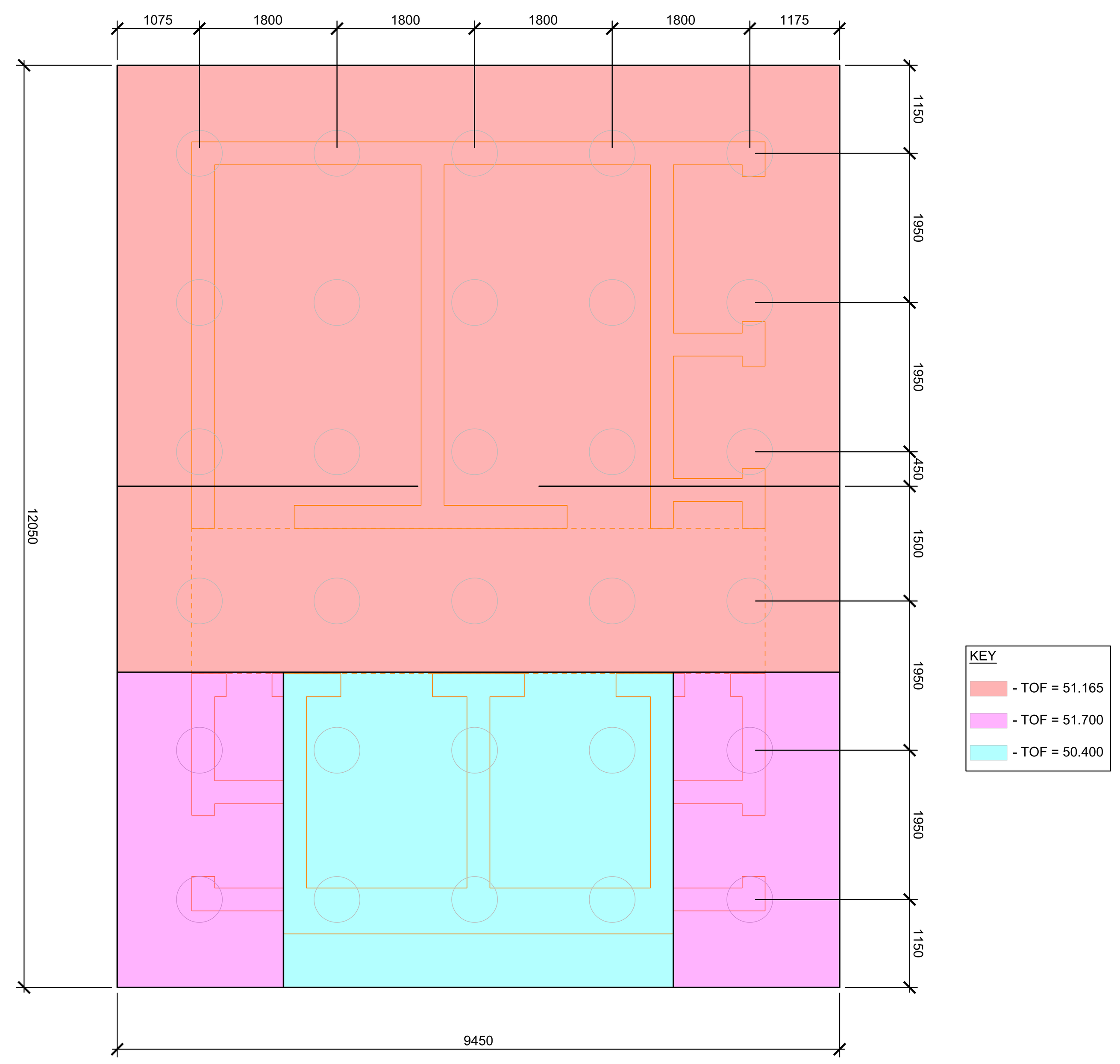
Section D-D
Scale 1:50



Section E-E
Scale 1:50



Section F-F
Scale 1:50



Part Plan on Core Foundation
Scale 1:50

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   S0 - WIP
   Shared (non-contractual):
   S1 - Coordination, **S2** - Information, **S3** - Review, **S4** & **S5** - Approval.
   Published (contractual):
   A1, **An**, etc. (where "n" relates to the project stage)
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Everything is indicative at this stage and is for costing / discussion

REV.	DATE	REVISION DETAILS	INITIALS
P01	20.03.26	Stage 2 - Preliminary Issue	TB
		CURRENT DRAWING REVISION CHECKED BY	AA
		CURRENT DRAWING REVISION APPROVED BY	IE

DRAWING STATUS: S1
PROJECT STAGE: Stage 2

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PROJECT: Rochdale Road 2

TITLE: Foundation Details

SCALE (A0)	AUTHOR	DATE	REVISION	BKPL No.
1:50	TB	Mar 26	P01	15286

DRAWING REF: 15286-BKP-V1-FN-DR-S-1001

Gravity Loading - Typical Upper Floors	
Dead Load	
250mm Flat Slab	6.25 kN/m²
Latex Screed (2-5mm)	0.10 kN/m²
Carpet & Underlay	0.05 kN/m²
Ceiling & Services	0.50 kN/m²
Total	6.90 kN/m²
Imposed Load	
A2 Residential	1.50 kN/m²
Partitions	1.00 kN/m²
C31 Circulation	3.00 kN/m²
Stairs & Landings	3.00 kN/m²

Gravity Loading - Roof Terrace	
Dead Load	
250mm Flat Slab	6.25 kN/m²
Alumasc Blue Roof	2.60 kN/m²
Ceiling & Services	0.40 kN/m²
Imposed Load	
A6 Terrace	3.00 kN/m²

Cladding Loading (Applied every 2nd floor as a linear load)	
Dead Load	
Precast concrete cladding	21.00 kN/m

Note:

The initial scheme has been developed using charts and data from Economic Concrete Frame Elements to Eurocode 2. Preliminary member sizing is intended to present feasible options and provide first-order reinforcement estimates.

At detailed design stage, once comments are received and loading assumptions are confirmed, the scheme will be iterated to rationalise member sizes and ensure suitability for architectural and functional requirements.

Reinforcement quantities provided at this stage are budget estimates to support cost planning; these will be refined during detailed design to improve efficiency.

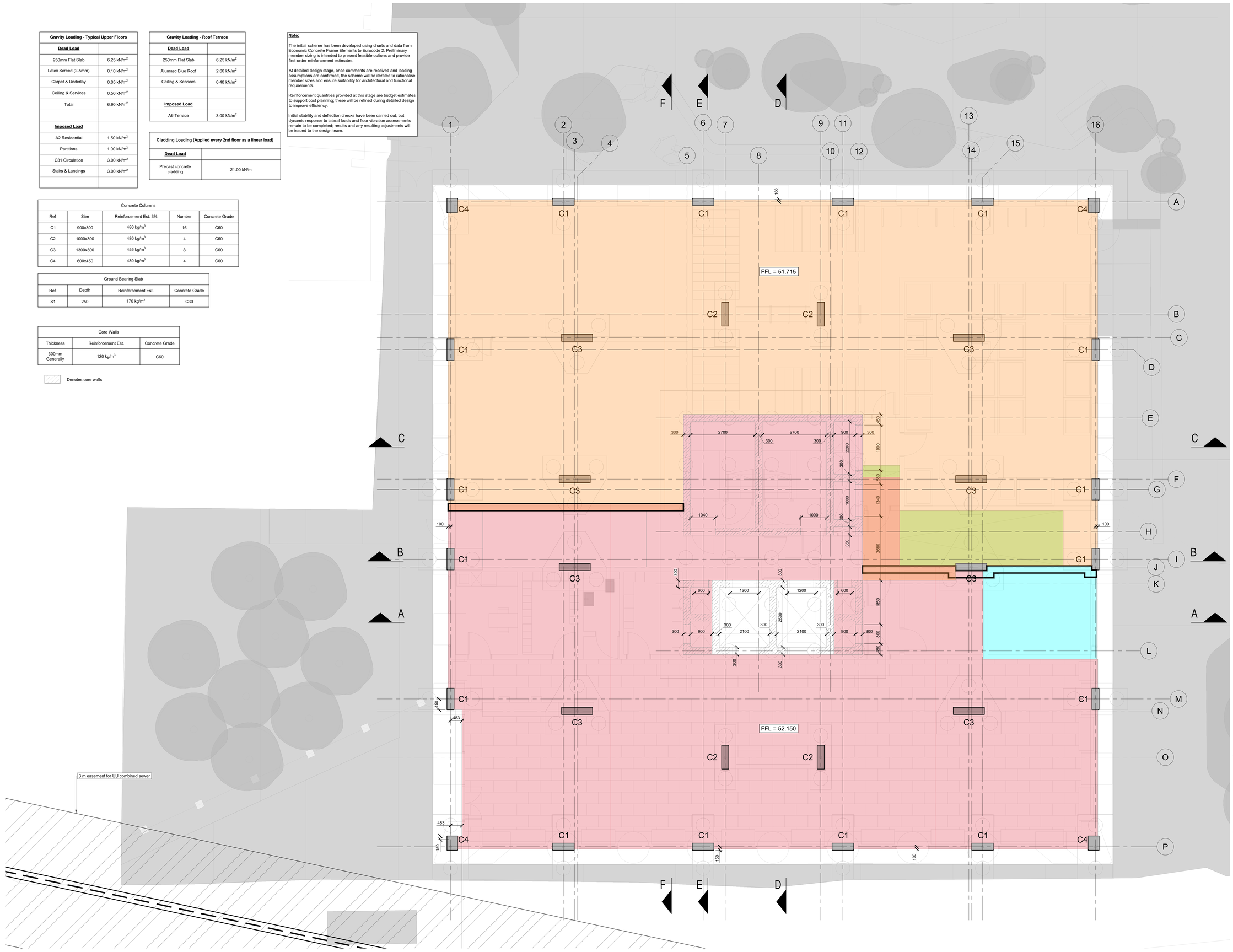
Initial stability and deflection checks have been carried out, but dynamic response to lateral loads and floor vibration assessments remain to be completed; results and any resulting adjustments will be issued to the design team.

Concrete Columns				
Ref	Size	Reinforcement Est. 3%	Number	Concrete Grade
C1	900x300	480 kg/m³	16	C60
C2	1000x300	480 kg/m³	4	C60
C3	1300x300	455 kg/m³	8	C60
C4	600x450	480 kg/m³	4	C60

Ground Bearing Slab			
Ref	Depth	Reinforcement Est.	Concrete Grade
S1	250	170 kg/m³	C30

Core Walls		
Thickness	Reinforcement Est.	Concrete Grade
300mm Generally	120 kg/m³	C60

Denotes core walls



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KEY

- Substation Slab - SSL = 51.165
- Lower Ground Bearing Slab - SSL = 51.615
- Upper Ground Bearing Slab - SSL = 52.150
- Ramp / Stair - SSL = 51.615
- Upper Slab Over Lower Slab - SSL 52.150

NOTE

For sections refer to BKP drawing 1001

Everything is indicative at this stage and is for costing / discussion

REV.	DATE	REVISION DETAILS	INITIALS
P01	20.03.26	2a - Proposed Scheme Design	TB
		CURRENT DRAWING REVISION CHECKED BY	AA
		CURRENT DRAWING REVISION APPROVED BY	AA

DRAWING STATUS: S1

PROJECT STAGE: Stage 2

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PROJECT: Rochdale Road 2

TITLE: Level 00 Ground Floor GA Plan

SCALE (A0)	AUTHOR	DATE	REVISION	BKPL No.
1:50	CW	Mar 26	P01	15286

DRAWING REF: 15286-BKP-V1-01-DR-S-3000

Gravity Loading - Typical Upper Floors	
Dead Load	
250mm Flat Slab	6.25 kN/m^2
Latex Screed (2-5mm)	0.10 kN/m^2
Carpet & Underlay	0.05 kN/m^2
Ceiling & Services	0.50 kN/m^2
Total	6.90 kN/m^2
Imposed Load	
A2 Residential	1.50 kN/m^2
Partitions	1.00 kN/m^2
C31 Circulation	3.00 kN/m^2
Stairs & Landings	3.00 kN/m^2

Gravity Loading - Roof Terrace	
Dead Load	
250mm Flat Slab	6.25 kN/m^2
Alumasc Blue Roof	2.60 kN/m^2
Ceiling & Services	0.40 kN/m^2
Imposed Load	
A6 Terrace	3.00 kN/m^2

Cladding Loading (Applied every 2nd floor as a linear load)	
Dead Load	
Precast concrete cladding	21.00 kN/m

Note:

The initial scheme has been developed using charts and data from Economic Concrete Frame Elements to Eurocode 2. Preliminary member sizing is intended to present feasible options and provide first-order reinforcement estimates.

At detailed design stage, once comments are received and loading assumptions are confirmed, the scheme will be iterated to rationalise member sizes and ensure suitability for architectural and functional requirements.

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Initial stability and deflection checks have been carried out, but dynamic response to lateral loads and floor vibration assessments remain to be completed; results and any resulting adjustments will be issued to the design team.

Concrete Columns				
Ref	Size	Reinforcement Est. 3%	Number	Concrete Grade
C1	900x300	480 kg/m^3	16	C60
C2	1000x300	480 kg/m^3	4	C60
C3	1300x300	455 kg/m^3	8	C60
C5	730x400	480 kg/m^3	4	C60

Flat Slab			
Ref	Depth	Reinforcement Est.	Concrete Grade
S1	250	170 kg/m^3	C50
S2	300	190 kg/m^3	C50

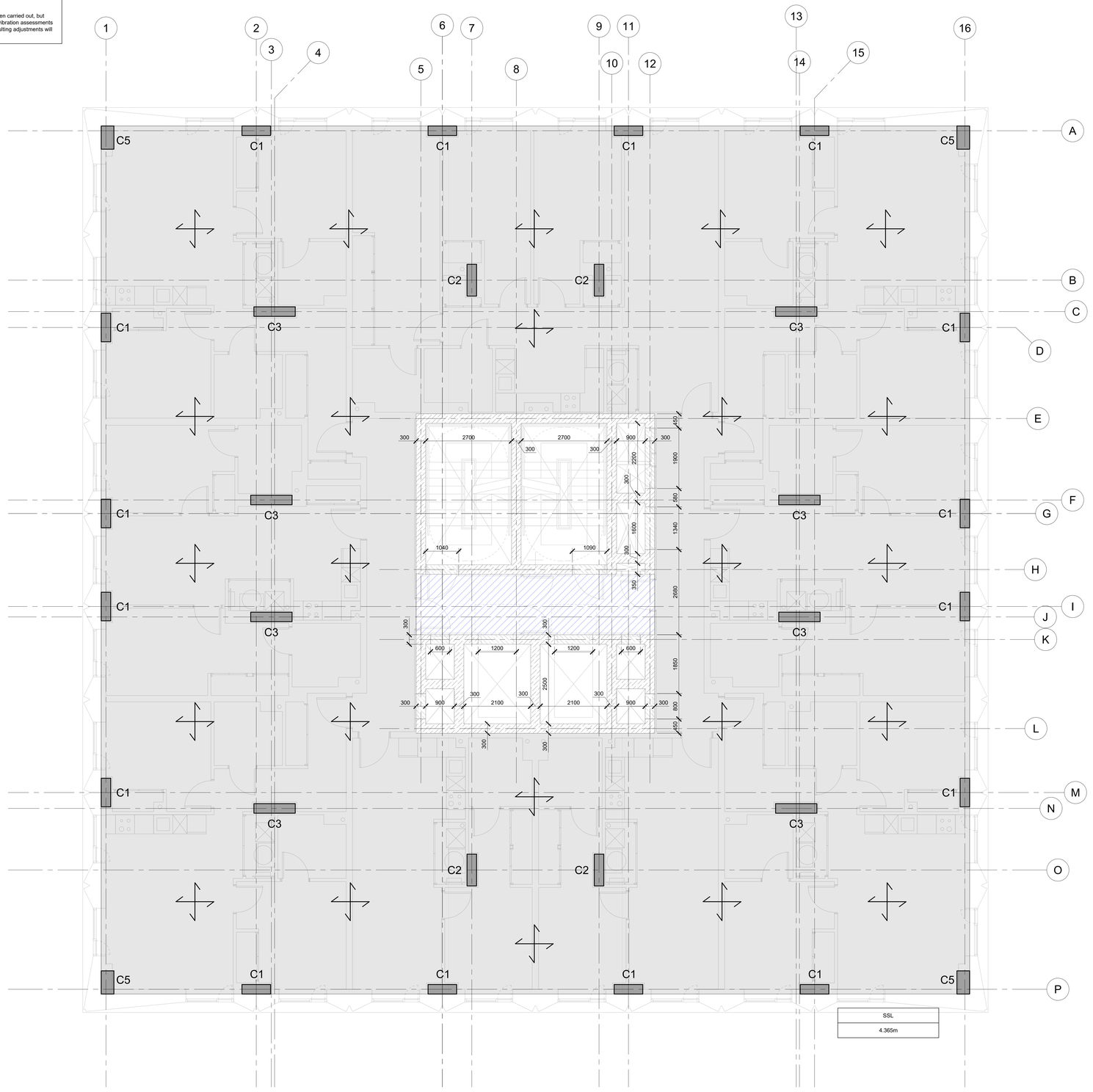
Core Walls		
Thickness	Reinforcement Est.	Concrete Grade
300mm Generally	65 kg/m^3	C60

Denotes span of S1 and S2 Flat slab.

Denotes extents of S1 Flat slab

Denotes extents of S2 Flat slab between stairs and lift cores

Denotes core walls



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REV.	DATE	REVISION DETAILS	INITIALS
P03	20.03.25	2a - Proposed Scheme Design Updated	TB
P02	02.09.25	2a - Proposed Scheme Design Updated	CW
P01	29.08.25	2a - Proposed Scheme Design	CW
		CURRENT DRAWING REVISION CHECKED BY	AA
		CURRENT DRAWING REVISION APPROVED BY	AA

DRAWING STATUS: S1

PROJECT STAGE: Stage 2

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PROJECT: Rochdale Road 2

TITLE: Level 01 GA Plan

SCALE (A0)	AUTHOR	DATE	REVISION	BKPL No.
1:50	CW	29.08.25	P03	15286

DRAWING REF: 15286-BKP-V1-01-DR-S-3001

Gravity Loading - Typical Upper Floors	
Dead Load	
250mm Flat Slab	6.25 kN/m^2
Latex Screed (2-5mm)	0.10 kN/m^2
Carpet & Underlay	0.05 kN/m^2
Ceiling & Services	0.50 kN/m^2
Total	6.90 kN/m^2
Imposed Load	
A2 Residential	1.50 kN/m^2
Partitions	1.00 kN/m^2
C31 Circulation	3.00 kN/m^2
Stairs & Landings	3.00 kN/m^2

Gravity Loading - Roof Terrace	
Dead Load	
250mm Flat Slab	6.25 kN/m^2
Alumasc Blue Roof	2.60 kN/m^2
Ceiling & Services	0.40 kN/m^2
Imposed Load	
A6 Terrace	3.00 kN/m^2

Cladding Loading (Applied every 2nd floor as a linear load)	
Dead Load	
Precast concrete cladding	21.00 kN/m

Note:

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Concrete Columns				
Ref	Size	Reinforcement Est. 3%	Number	Concrete Grade
C1	900x300	480 kg/m^3	16	C60
C2	1000x300	480 kg/m^3	4	C60
C3	1300x300	455 kg/m^3	8	C60
C5	730x400	480 kg/m^3	4	C60

Flat Slab			
Ref	Depth	Reinforcement Est.	Concrete Grade
S1	250	170 kg/m^3	C50
S2	300	190 kg/m^3	C50

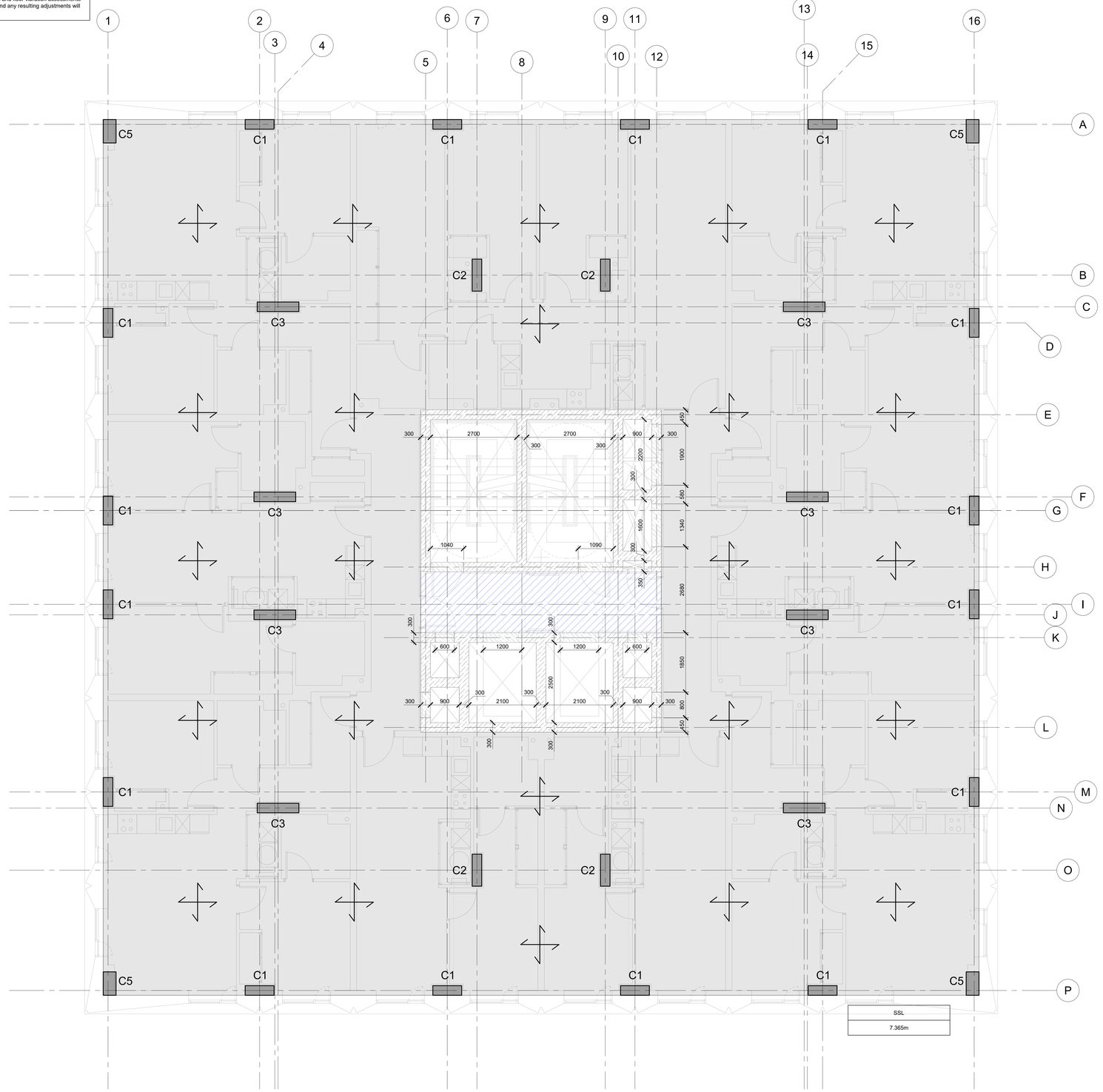
Core Walls		
Thickness	Reinforcement Est.	Concrete Grade
300mm Generally	65 kg/m^3	C60

Denotes span of S1 and S2 Flat slab.

Denotes extents of S1 Flat slab

Denotes extents of S2 Flat slab between stairs and lift cores

Denotes core walls



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REV.	DATE	REVISION DETAILS	INITIALS
P03	20.03.26	2a - Proposed Scheme Design Updated	AL
P02	02.09.25	2a - Proposed Scheme Design Updated	CW
P01	29.08.25	2a-Proposed Scheme Design	CW
		CURRENT DRAWING REVISION CHECKED BY	AA
		CURRENT DRAWING REVISION APPROVED BY	AA

DRAWING STATUS: S1

PROJECT STAGE: Stage 2

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PROJECT: Rochdale Road 2

TITLE: Level 02 GA Plan

SCALE (A0)	AUTHOR	DATE	REVISION	BKPL No.
1:50	CW	29.08.25	P03	15286

DRAWING REF: 15286-BKP-V1-02-DR-S-3002

Gravity Loading - Typical Upper Floors	
Dead Load	
250mm Flat Slab	6.25 kN/m^2
Latex Screed (2-5mm)	0.10 kN/m^2
Carpet & Underlay	0.05 kN/m^2
Ceiling & Services	0.50 kN/m^2
Total	6.90 kN/m^2
Imposed Load	
A2 Residential	1.50 kN/m^2
Partitions	1.00 kN/m^2
C31 Circulation	3.00 kN/m^2
Stairs & Landings	3.00 kN/m^2

Gravity Loading - Roof Terrace	
Dead Load	
250mm Flat Slab	6.25 kN/m^2
Alumasc Blue Roof	2.60 kN/m^2
Ceiling & Services	0.40 kN/m^2
Imposed Load	
A6 Terrace	3.00 kN/m^2

Cladding Loading (Applied every 2nd floor as a linear load)	
Dead Load	
Precast concrete cladding	21.00 kN/m

Note:

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Concrete Columns				
Ref	Size	Reinforcement Est. 3%	Number	Concrete Grade
C1	900x300	480 kg/m^3	16	C60
C2	1000x300	480 kg/m^3	4	C60
C3	1300x300	455 kg/m^3	8	C60
C5	730x400	480 kg/m^3	4	C60

Flat Slab			
Ref	Depth	Reinforcement Est.	Concrete Grade
S1	250	170 kg/m^3	C50
S2	300	190 kg/m^3	C50

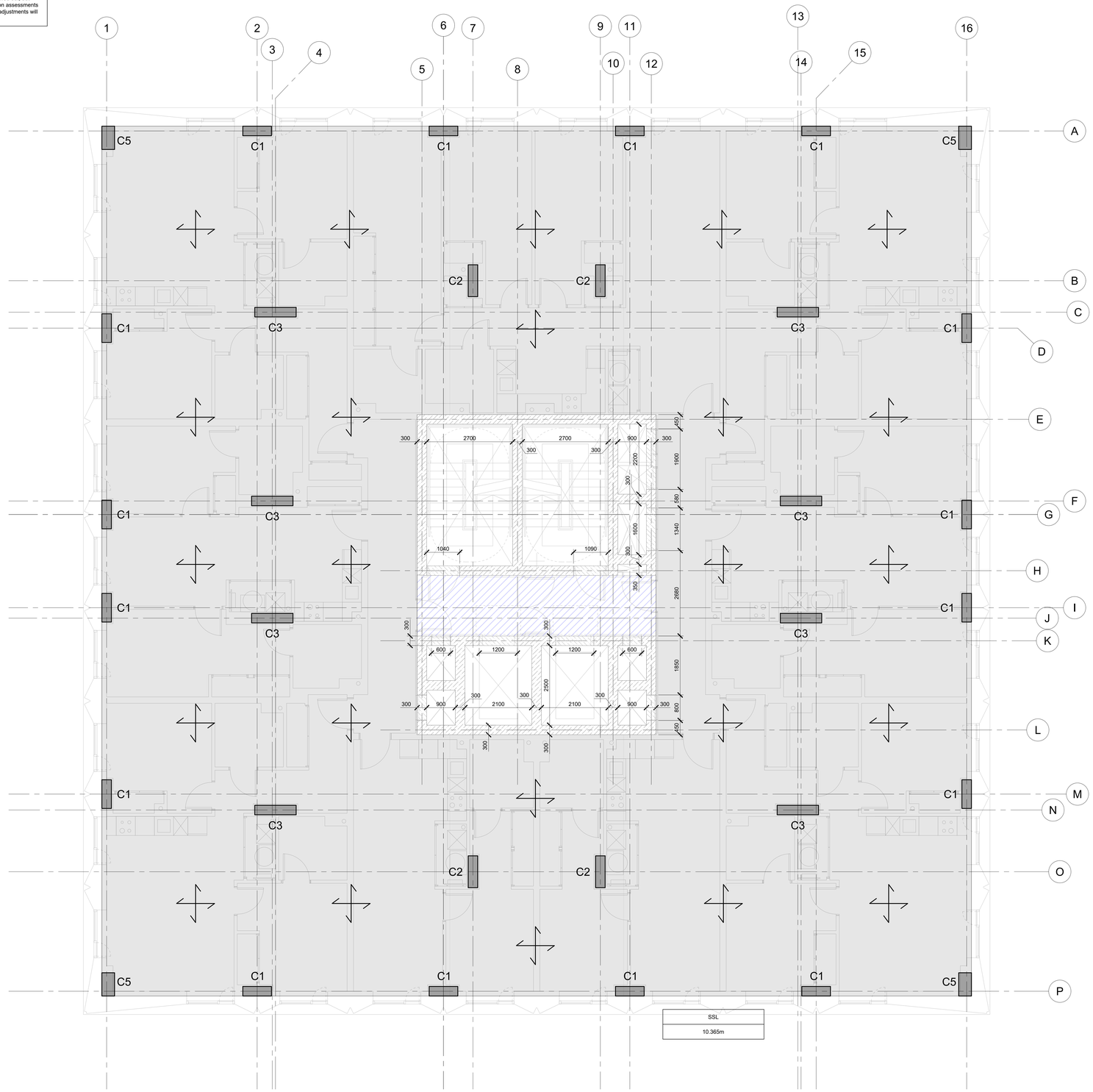
Core Walls		
Thickness	Reinforcement Est.	Concrete Grade
300mm Generally	65 kg/m^3	C60

Denotes span of S1 and S2 Flat slab.

Denotes extents of S1 Flat slab

Denotes extents of S2 Flat slab between stairs and lift cores

Denotes core walls



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REV.	DATE	REVISION DETAILS	INITIALS
P03	20.03.26	2a - Proposed Scheme Design Updated	AL
P02	02.09.25	2a - Proposed Scheme Design Updated	CW
P01	29.08.25	2a - Proposed Scheme Design	CW
		CURRENT DRAWING REVISION CHECKED BY	AA
		CURRENT DRAWING REVISION APPROVED BY	AA

DRAWING STATUS: S1

PROJECT STAGE: Stage 2

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RAMSBOTTOM Tel: 01706 822 022 | **MANCHESTER** Tel: 0161 694 7087 | **EDINBURGH** Tel: 0131 229 1547

PROJECT: Rochdale Road 2

TITLE: Level 03 GA Plan

SCALE (A0)	AUTHOR	DATE	REVISION	BKPL No.
1:50	CW	29.08.25	P03	15286

DRAWING REF: 15286-BKP-V1-03-DR-S-3003

Gravity Loading - Typical Upper Floors	
Dead Load	
250mm Flat Slab	6.25 kN/m^2
Latex Screed (2-5mm)	0.10 kN/m^2
Carpet & Underlay	0.05 kN/m^2
Ceiling & Services	0.50 kN/m^2
Total	6.90 kN/m^2
Imposed Load	
A2 Residential	1.50 kN/m^2
Partitions	1.00 kN/m^2
C31 Circulation	3.00 kN/m^2
Stairs & Landings	3.00 kN/m^2

Gravity Loading - Roof Terrace	
Dead Load	
250mm Flat Slab	6.25 kN/m^2
Alumasc	2.60 kN/m^2
Ceiling & Services	0.40 kN/m^2
Imposed Load	
A6 Terrace	3.00 kN/m^2

Cladding Loading (Applied every 2nd floor as a linear load)	
Dead Load	
Precast concrete cladding	21.00 kN/m

Note:

The initial scheme has been developed using charts and data from Economic Concrete Frame Elements to Eurocode 2. Preliminary member sizing is intended to present feasible options and provide first-order reinforcement estimates.

At detailed design stage, once comments are received and loading assumptions are confirmed, the scheme will be iterated to rationalise member sizes and ensure suitability for architectural and functional requirements.

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Initial stability and deflection checks have been carried out, but dynamic response to lateral loads and floor vibration assessments remain to be completed; results and any resulting adjustments will be issued to the design team.

Concrete Columns				
Ref	Size	Reinforcement Est. 3%	Number	Concrete Grade
C1	900x300	480 kg/m^3	16	C60
C2	1000x300	480 kg/m^3	4	C60
C3	1300x300	455 kg/m^3	8	C60
C5	730x400	480 kg/m^3	4	C60

Flat Slab			
Ref	Depth	Reinforcement Est.	Concrete Grade
S1	250	170 kg/m^3	C50
S2	300	190 kg/m^3	C50

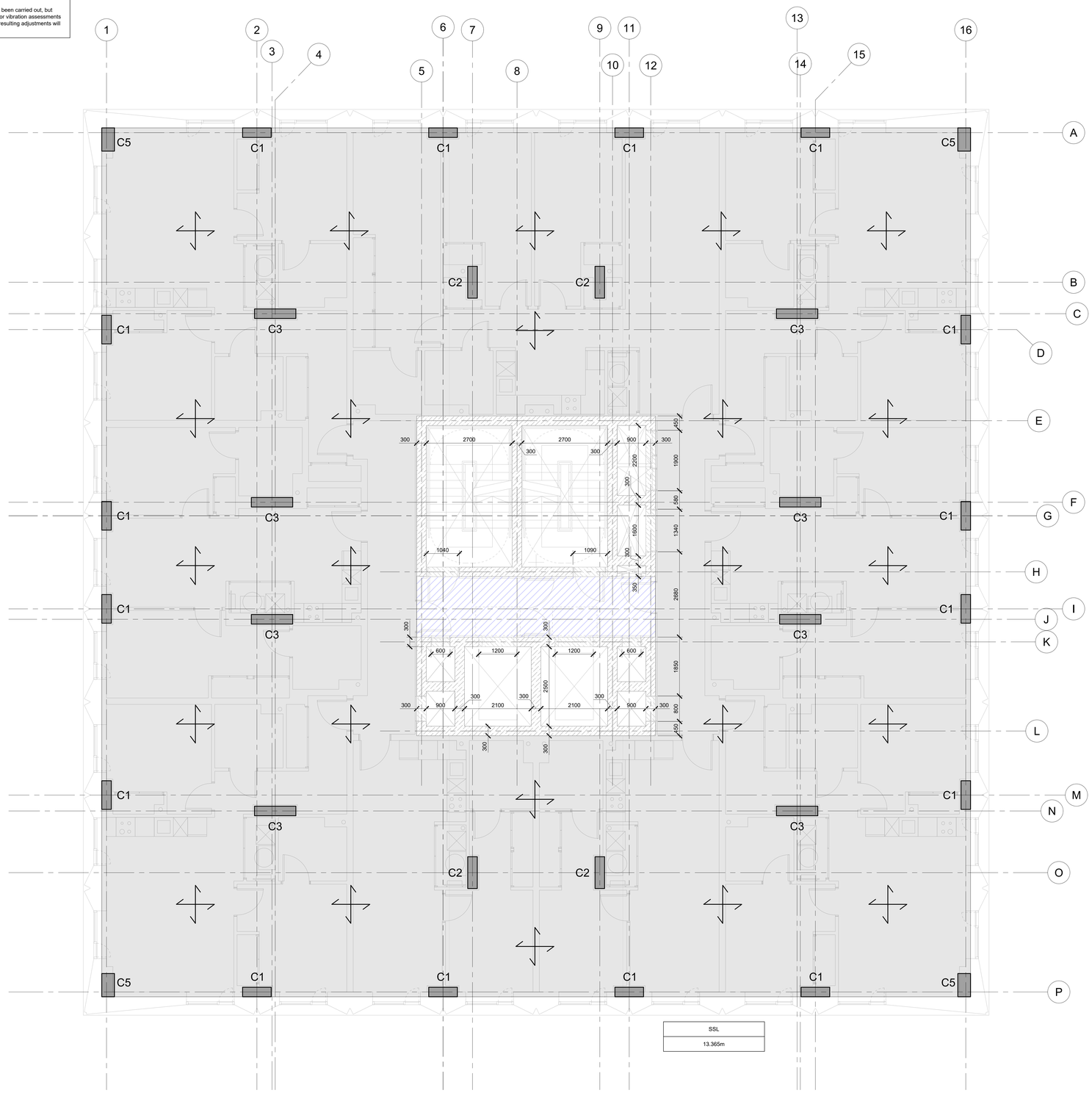
Core Walls		
Thickness	Reinforcement Est.	Concrete Grade
300mm Generally	65 kg/m^3	C60

Denotes span of S1 and S2 Flat slab.

Denotes extents of S1 Flat slab

Denotes extents of S2 Flat slab between stairs and lift cores

Denotes core walls



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   S0 - WIP
   Shared (non-contractual):
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REV.	DATE	REVISION DETAILS	INITIALS
P03	20.03.26	2a - Proposed Scheme Design Updated	AL
P02	02.09.25	2a - Proposed Scheme Design Updated	CW
P01	29.08.25	2a - Proposed Scheme Design	CW
		CURRENT DRAWING REVISION CHECKED BY	AA
		CURRENT DRAWING REVISION APPROVED BY	AA

DRAWING STATUS:	PROJECT STAGE:
S1	Stage 2

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PROJECT:

Rochdale Road 2

TITLE:

Level 04 GA Plan

SCALE (A0)	AUTHOR	DATE	REVISION	BKPL No.
1:50	CW	29.08.25	P03	15286

DRAWING REF:

15286-BKP-V1-04-DR-S-3004

Gravity Loading - Typical Upper Floors	
Dead Load	
250mm Flat Slab	6.25 kN/m^2
Latex Screed (2-5mm)	0.10 kN/m^2
Carpet & Underlay	0.05 kN/m^2
Ceiling & Services	0.50 kN/m^2
Total	6.90 kN/m^2
Imposed Load	
A2 Residential	1.50 kN/m^2
Partitions	1.00 kN/m^2
C31 Circulation	3.00 kN/m^2
Stairs & Landings	3.00 kN/m^2

Gravity Loading - Roof Terrace	
Dead Load	
250mm Flat Slab	6.25 kN/m^2
Alumasc Blue Roof	2.60 kN/m^2
Ceiling & Services	0.40 kN/m^2
Imposed Load	
A6 Terrace	3.00 kN/m^2

Cladding Loading (Applied every 2nd floor as a linear load)	
Dead Load	
Precast concrete cladding	21.00 kN/m

Note:

The initial scheme has been developed using charts and data from Economic Concrete Frame Elements to Eurocode 2. Preliminary member sizing is intended to present feasible options and provide first-order reinforcement estimates.

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Concrete Columns				
Ref	Size	Reinforcement Est. 3%	Number	Concrete Grade
C1	900x300	480 kg/m^3	16	C60
C2	1000x300	480 kg/m^3	4	C60
C3	1300x300	455 kg/m^3	8	C60
C5	730x400	480 kg/m^3	4	C60

Flat Slab			
Ref	Depth	Reinforcement Est.	Concrete Grade
S1	250	170 kg/m^3	C50
S2	300	190 kg/m^3	C50

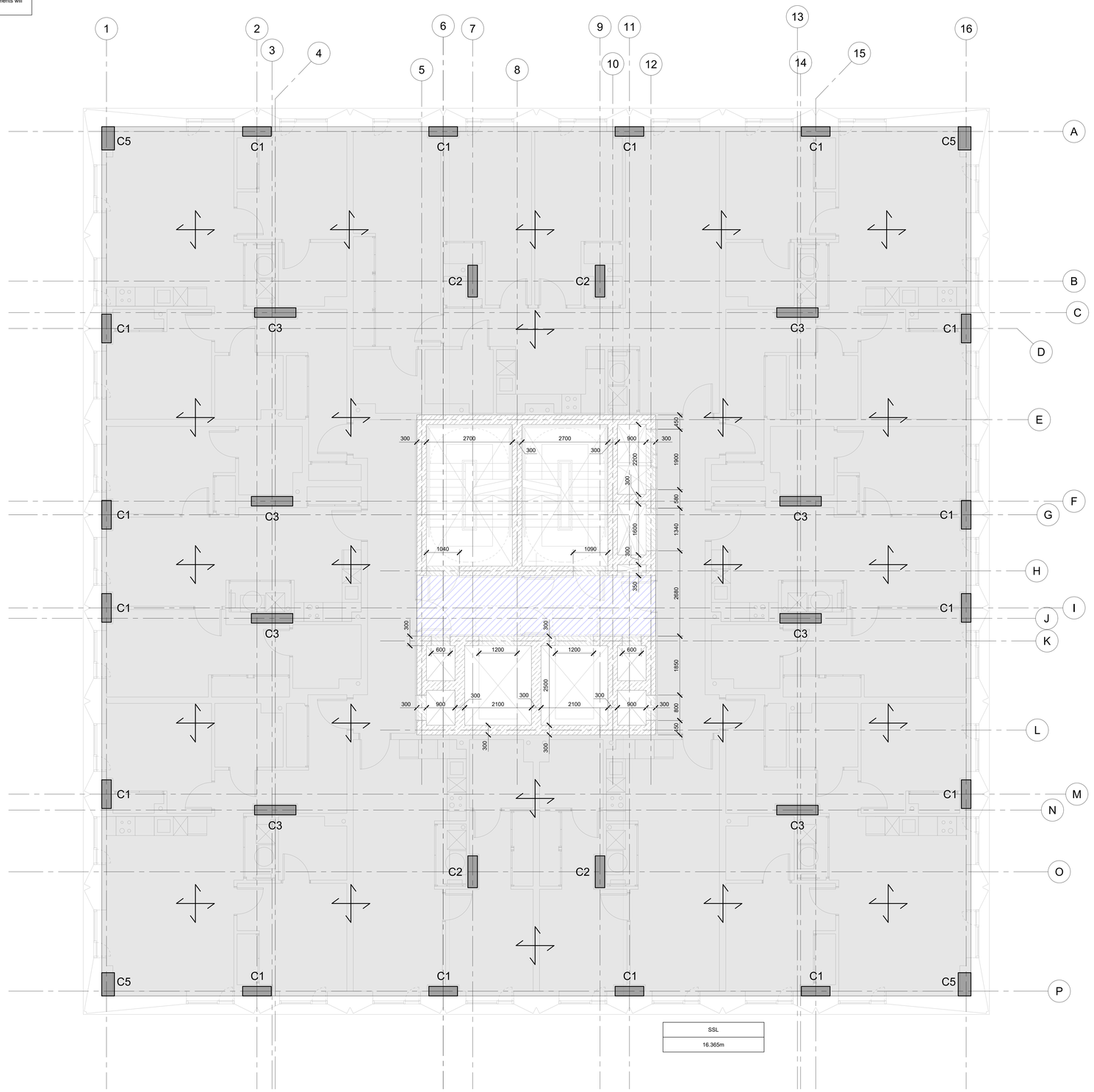
Core Walls		
Thickness	Reinforcement Est.	Concrete Grade
300mm Generally	65 kg/m^3	C60

Denotes span of S1 and S2 Flat slab.

Denotes extents of S1 Flat slab

Denotes extents of S2 Flat slab between stairs and lift cores

Denotes core walls



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REV.	DATE	REVISION DETAILS	INITIALS
P03	20.03.26	2a - Proposed Scheme Design Updated	AL
P02	02.09.25	2a - Proposed Scheme Design Updated	CW
P01	29.08.25	2a- Proposed Scheme Design	CW
		CURRENT DRAWING REVISION CHECKED BY	AA
		CURRENT DRAWING REVISION APPROVED BY	AA

DRAWING STATUS: S1

PROJECT STAGE: Stage 2

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PROJECT: Rochdale Road 2

TITLE: Level 05 GA Plan

SCALE (A0)	AUTHOR	DATE	REVISION	BKPL No.
1:50	CW	29.08.25	P03	15286

DRAWING REF: 15286-BKP-V1-05-DR-S-3005

Gravity Loading - Typical Upper Floors	
Dead Load	
250mm Flat Slab	6.25 kN/m^2
Latex Screed (2-5mm)	0.10 kN/m^2
Carpet & Underlay	0.05 kN/m^2
Ceiling & Services	0.50 kN/m^2
Total	6.90 kN/m^2
Imposed Load	
A2 Residential	1.50 kN/m^2
Partitions	1.00 kN/m^2
C31 Circulation	3.00 kN/m^2
Stairs & Landings	3.00 kN/m^2

Gravity Loading - Roof Terrace	
Dead Load	
250mm Flat Slab	6.25 kN/m^2
Alumasc Blue Roof	2.60 kN/m^2
Ceiling & Services	0.40 kN/m^2
Imposed Load	
A6 Terrace	3.00 kN/m^2

Cladding Loading (Applied every 2nd floor as a linear load)	
Dead Load	
Precast concrete cladding	21.00 kN/m

Note:

The initial scheme has been developed using charts and data from Economic Concrete Frame Elements to Eurocode 2. Preliminary member sizing is intended to present feasible options and provide first-order reinforcement estimates.

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Concrete Columns				
Ref	Size	Reinforcement Est. 3%	Number	Concrete Grade
C1	900x300	480 kg/m^3	16	C60
C2	1000x300	480 kg/m^3	4	C60
C3	1300x300	455 kg/m^3	8	C60
C5	730x400	480 kg/m^3	4	C60

Flat Slab			
Ref	Depth	Reinforcement Est.	Concrete Grade
S1	250	170 kg/m^3	C50
S2	300	190 kg/m^3	C50

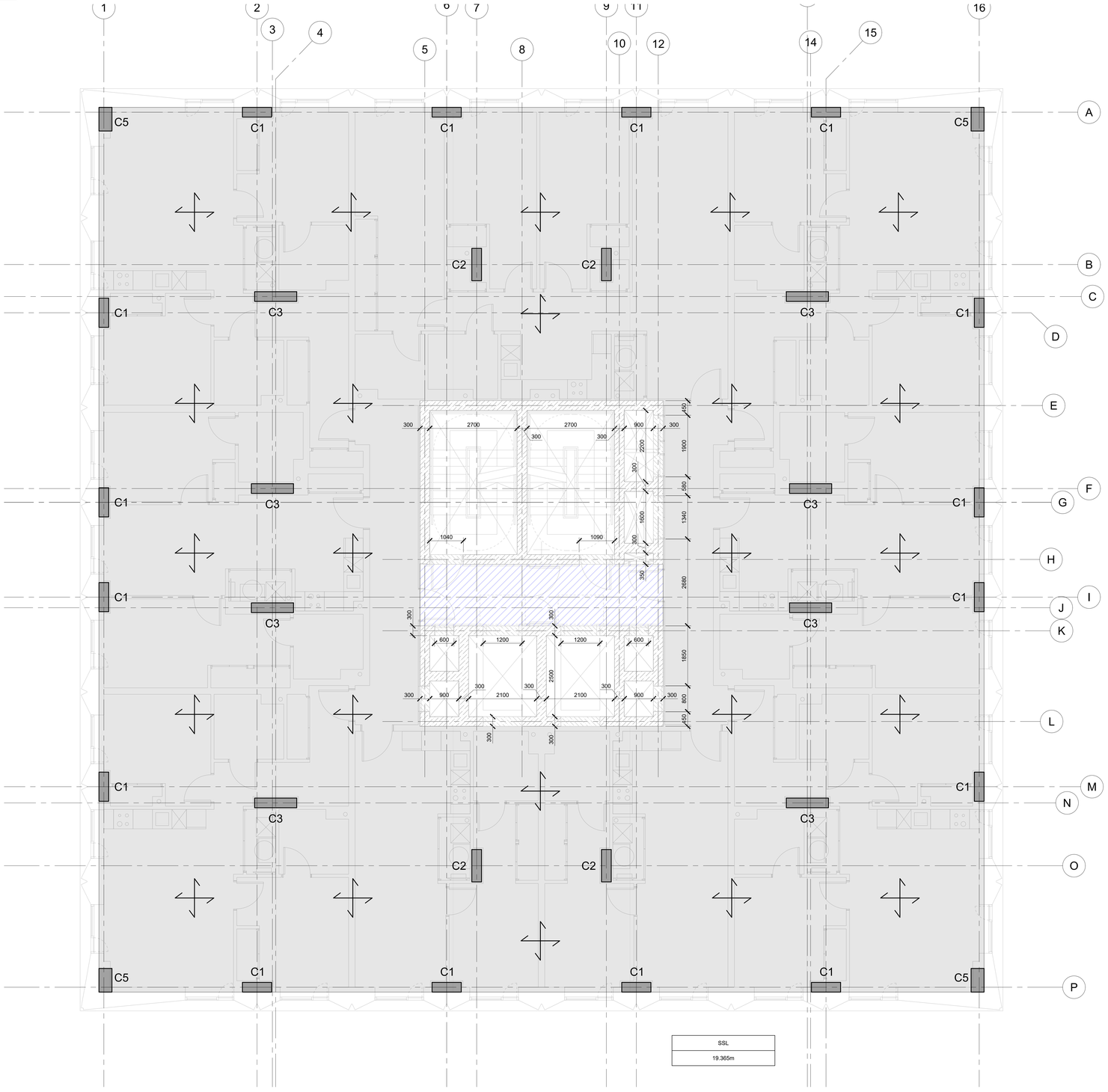
Core Walls		
Thickness	Reinforcement Est.	Concrete Grade
300mm Generally	65 kg/m^3	C60

Denotes span of S1 and S2 Flat slab.

Denotes extents of S1 Flat slab

Denotes extents of S2 Flat slab between stairs and lift cores

Denotes core walls



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REV.	DATE	REVISION DETAILS	INITIALS
P03	20.03.26	2a - Proposed Scheme Design Updated	AL
P02	02.09.25	2a - Proposed Scheme Design Updated	CW
P01	29.08.25	2a- Proposed Scheme Design	CW
		CURRENT DRAWING REVISION CHECKED BY	AA
		CURRENT DRAWING REVISION APPROVED BY	AA

DRAWING STATUS: S1

PROJECT STAGE: Stage 2

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PROJECT: Rochdale Road 2

TITLE: Level 06 GA Plan

SCALE (A0)	AUTHOR	DATE	REVISION	BKPL No.
1:50	CW	29.08.25	P03	15286

DRAWING REF: 15286-BKP-V1-06-DR-S-3006

Gravity Loading - Typical Upper Floors	
Dead Load	
250mm Flat Slab	6.25 kN/m^2
Latex Screed (2-5mm)	0.10 kN/m^2
Carpet & Underlay	0.05 kN/m^2
Ceiling & Services	0.50 kN/m^2
Total	6.90 kN/m^2
Imposed Load	
A2 Residential	1.50 kN/m^2
Partitions	1.00 kN/m^2
C31 Circulation	3.00 kN/m^2
Stairs & Landings	3.00 kN/m^2

Gravity Loading - Roof Terrace	
Dead Load	
250mm Flat Slab	6.25 kN/m^2
Alumasc Blue Roof	2.60 kN/m^2
Ceiling & Services	0.40 kN/m^2
Imposed Load	
A6 Terrace	3.00 kN/m^2

Cladding Loading (Applied every 2nd floor as a linear load)	
Dead Load	
Precast concrete cladding	21.00 kN/m

Note:

The initial scheme has been developed using charts and data from Economic Concrete Frame Elements to Eurocode 2. Preliminary member sizing is intended to present feasible options and provide first-order reinforcement estimates.

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Concrete Columns				
Ref	Size	Reinforcement Est. 3%	Number	Concrete Grade
C1	900x300	480 kg/m^3	16	C60
C2	1000x300	480 kg/m^3	4	C60
C3	1300x300	455 kg/m^3	8	C60
C5	730x400	480 kg/m^3	4	C60

Flat Slab			
Ref	Depth	Reinforcement Est.	Concrete Grade
S1	250	170 kg/m^3	C50
S2	300	190 kg/m^3	C50

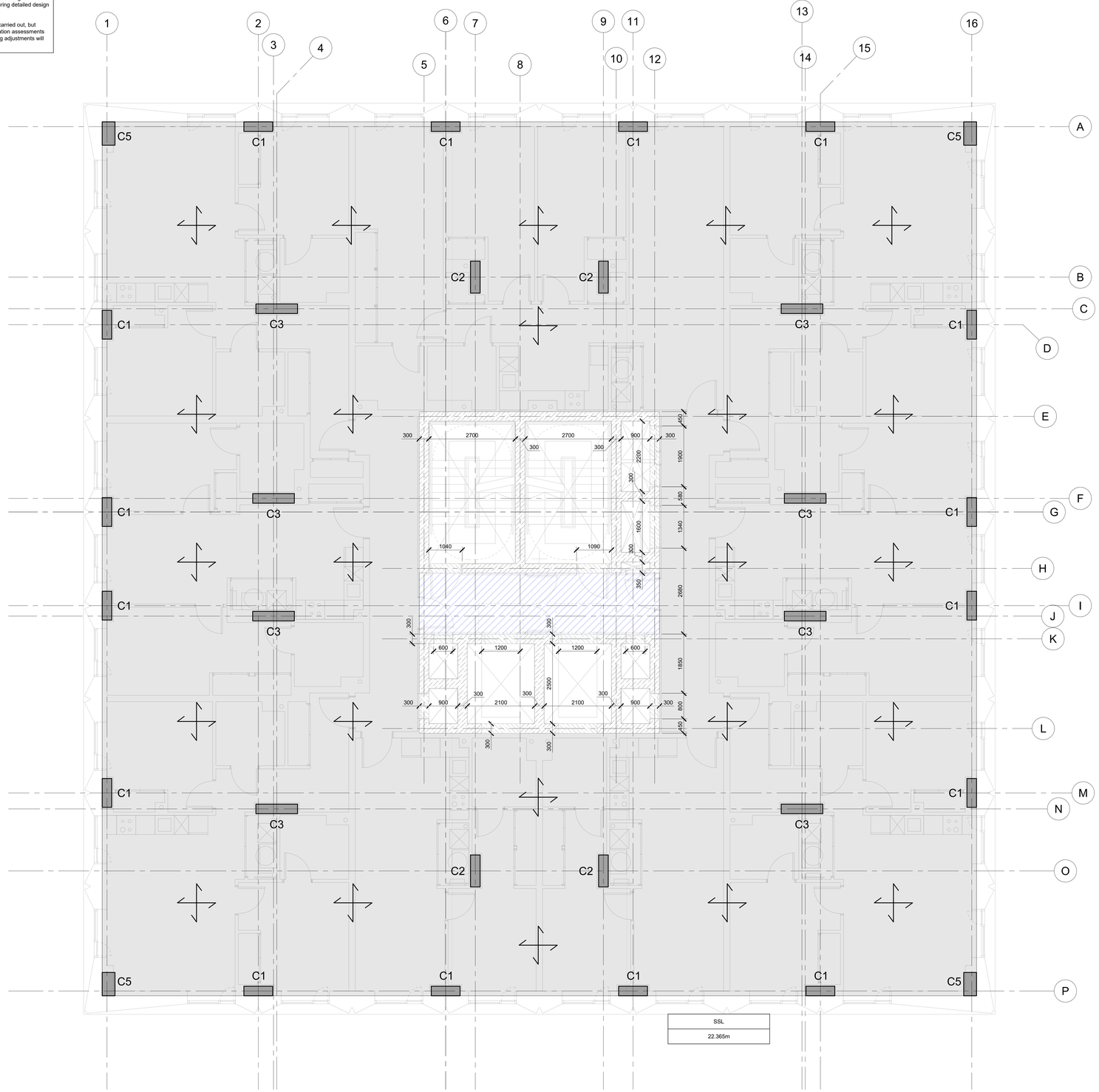
Core Walls		
Thickness	Reinforcement Est.	Concrete Grade
300mm Generally	65 kg/m^3	C60

Denotes span of S1 and S2 Flat slab.

Denotes extents of S1 Flat slab

Denotes extents of S2 Flat slab between stairs and lift cores

Denotes core walls



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REV.	DATE	REVISION DETAILS	INITIALS
P03	20.03.26	2a - Proposed Scheme Design Updated	AL
P02	02.09.25	2a - Proposed Scheme Design Updated	CW
P01	29.08.25	2a- Proposed Scheme Design	CW
		CURRENT DRAWING REVISION CHECKED BY	AA
		CURRENT DRAWING REVISION APPROVED BY	AA

DRAWING STATUS: S1

PROJECT STAGE: Stage 2

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PROJECT: Rochdale Road 2

TITLE: Level 07 GA Plan

SCALE (A0)	AUTHOR	DATE	REVISION	BKPL No.
1:50	CW	29.08.25	P03	15286

DRAWING REF: 15286-BKP-V1-07-DR-S-3007

Gravity Loading - Typical Upper Floors	
Dead Load	
250mm Flat Slab	6.25 kN/m^2
Latex Screed (2-5mm)	0.10 kN/m^2
Carpet & Underlay	0.05 kN/m^2
Ceiling & Services	0.50 kN/m^2
Total	6.90 kN/m^2
Imposed Load	
A2 Residential	1.50 kN/m^2
Partitions	1.00 kN/m^2
C31 Circulation	3.00 kN/m^2
Stairs & Landings	3.00 kN/m^2

Gravity Loading - Roof Terrace	
Dead Load	
250mm Flat Slab	6.25 kN/m^2
Alumasc Blue Roof	2.60 kN/m^2
Ceiling & Services	0.40 kN/m^2
Imposed Load	
A6 Terrace	3.00 kN/m^2

Cladding Loading (Applied every 2nd floor as a linear load)	
Dead Load	
Precast concrete cladding	21.00 kN/m

Note:

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Concrete Columns				
Ref	Size	Reinforcement Est. 3%	Number	Concrete Grade
C1	900x300	480 kg/m^3	16	C60
C2	1000x300	480 kg/m^3	4	C60
C3	1300x300	455 kg/m^3	8	C60
C5	730x400	480 kg/m^3	4	C60

Flat Slab			
Ref	Depth	Reinforcement Est.	Concrete Grade
S1	250	170 kg/m^3	C50
S2	300	190 kg/m^3	C50

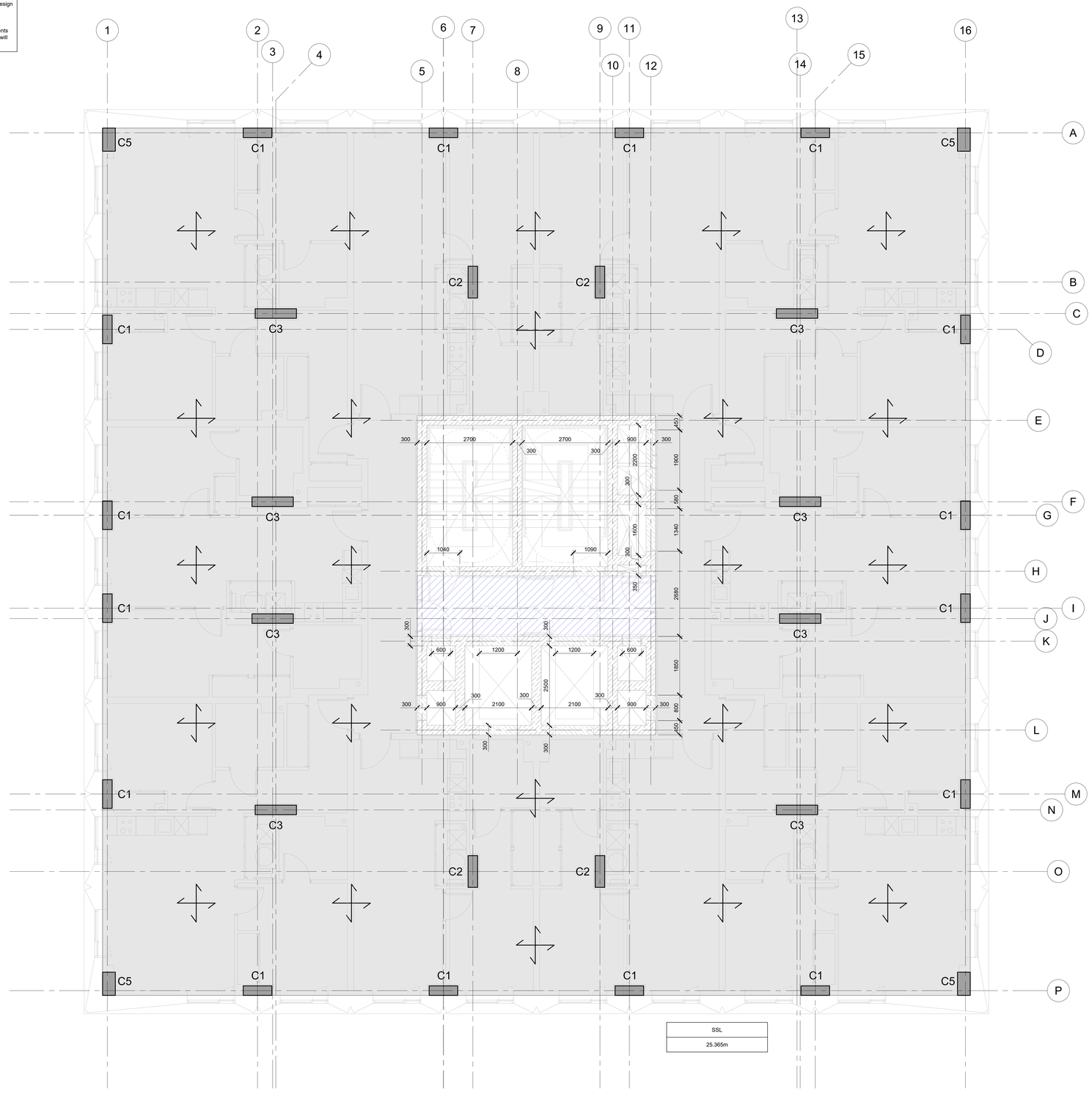
Core Walls		
Thickness	Reinforcement Est.	Concrete Grade
300mm Generally	65 kg/m^3	C60

Denotes span of S1 and S2 Flat slab.

Denotes extents of S1 Flat slab

Denotes extents of S2 Flat slab between stairs and lift cores

Denotes core walls



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REV.	DATE	REVISION DETAILS	INITIALS
P03	20.03.36	2a - Proposed Scheme Design Updated	TB
P02	02.09.25	2a - Proposed Scheme Design Updated	CW
P01	29.08.25	2a- Proposed Scheme Design	CW
		CURRENT DRAWING REVISION CHECKED BY	AA
		CURRENT DRAWING REVISION APPROVED BY	AA

DRAWING STATUS: S1

PROJECT STAGE: Stage 2

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CONSULTING CIVIL & STRUCTURAL ENGINEERS

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RAMSBOTTOM Tel: 01706 822 022 | **MANCHESTER** Tel: 0161 694 7087 | **EDINBURGH** Tel: 0131 229 1547

PROJECT: Rochdale Road 2

TITLE: Level 08 GA Plan

SCALE (A0)	AUTHOR	DATE	REVISION	BKPL No.
1:50	CW	29.08.25	P03	15286

DRAWING REF: 15286-BKP-V1-08-DR-S-3008

Gravity Loading - Typical Upper Floors	
Dead Load	
250mm Flat Slab	6.25 kN/m^2
Latex Screed (2-5mm)	0.10 kN/m^2
Carpet & Underlay	0.05 kN/m^2
Ceiling & Services	0.50 kN/m^2
Total	6.90 kN/m^2
Imposed Load	
A2 Residential	1.50 kN/m^2
Partitions	1.00 kN/m^2
C31 Circulation	3.00 kN/m^2
Stairs & Landings	3.00 kN/m^2

Gravity Loading - Roof Terrace	
Dead Load	
250mm Flat Slab	6.25 kN/m^2
Alumasc Blue Roof	2.60 kN/m^2
Ceiling & Services	0.40 kN/m^2
Imposed Load	
A6 Terrace	3.00 kN/m^2

Cladding Loading (Applied every 2nd floor as a linear load)	
Dead Load	
Precast concrete cladding	21.00 kN/m

Note:

The initial scheme has been developed using charts and data from Economic Concrete Frame Elements to Eurocode 2. Preliminary member sizing is intended to present feasible options and provide first-order reinforcement estimates.

At detailed design stage, once comments are received and loading assumptions are confirmed, the scheme will be iterated to rationalise member sizes and ensure suitability for architectural and functional requirements.

Reinforcement quantities provided at this stage are budget estimates to support cost planning; these will be refined during detailed design to improve efficiency.

Initial stability and deflection checks have been carried out, but dynamic response to lateral loads and floor vibration assessments remain to be completed; results and any resulting adjustments will be issued to the design team.

Concrete Columns				
Ref	Size	Reinforcement Est. 3%	Number	Concrete Grade
C1	900x300	480 kg/m^3	16	C60
C2	1000x300	480 kg/m^3	4	C60
C3	1300x300	455 kg/m^3	8	C60
C5	730x400	480 kg/m^3	4	C60

Flat Slab			
Ref	Depth	Reinforcement Est.	Concrete Grade
S1	250	170 kg/m^3	C50
S2	300	190 kg/m^3	C50

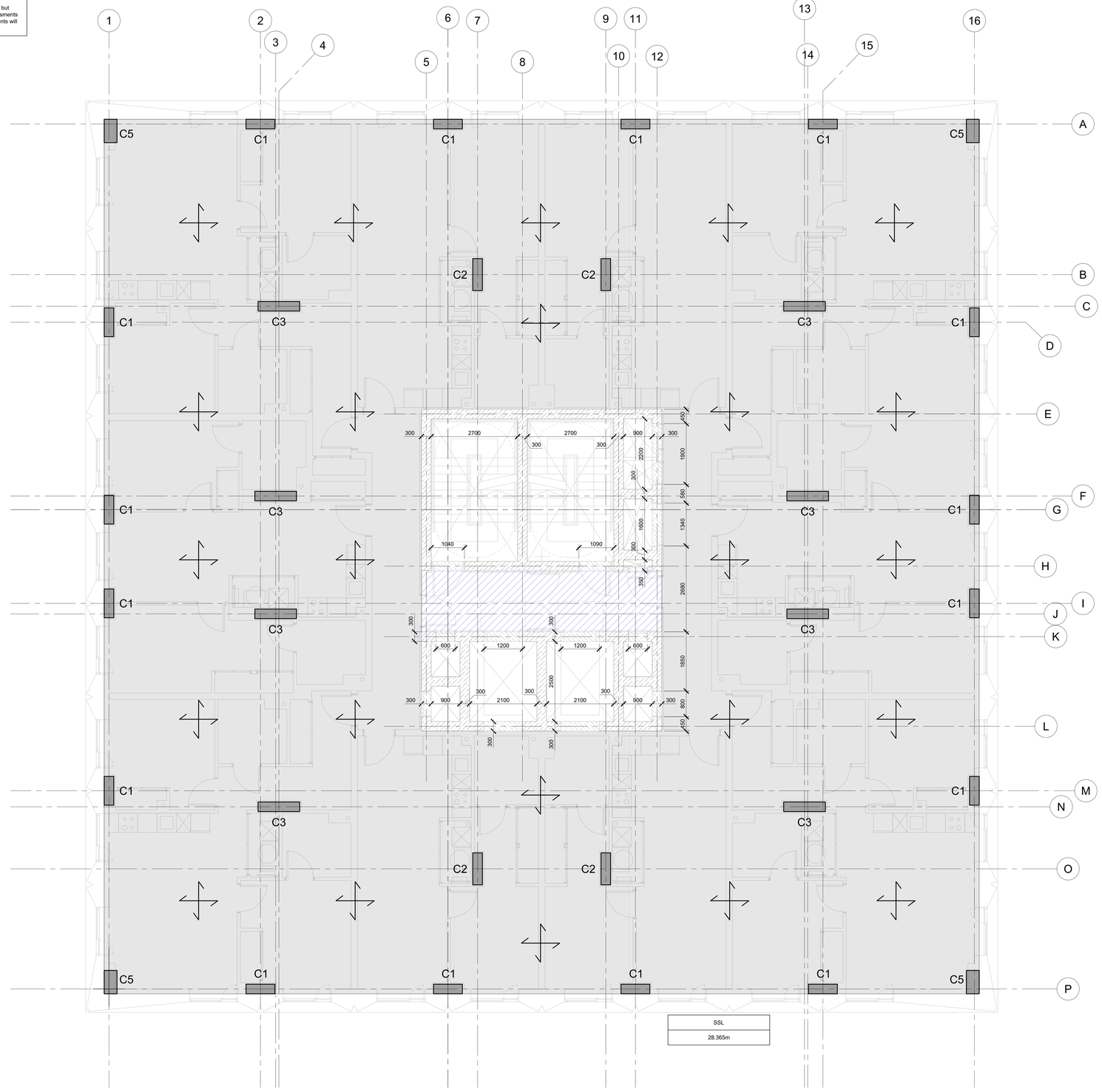
Core Walls		
Thickness	Reinforcement Est.	Concrete Grade
300mm Generally	65 kg/m^3	C60

Denotes span of S1 and S2 Flat slab.

Denotes extents of S1 Flat slab

Denotes extents of S2 Flat slab between stairs and lift cores

Denotes core walls



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REV.	DATE	REVISION DETAILS	INITIALS
P03	20.03.36	2a - Proposed Scheme Design Updated	TB
P02	02.09.25	2a - Proposed Scheme Design Updated	CW
P01	29.08.25	2a- Proposed Scheme Design	CW
		CURRENT DRAWING REVISION CHECKED BY	AA
		CURRENT DRAWING REVISION APPROVED BY	AA

DRAWING STATUS: S1

PROJECT STAGE: Stage 2

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RAMSBOTTOM Tel: 01706 822 022 | **MANCHESTER** Tel: 0161 694 7087 | **EDINBURGH** Tel: 0131 229 1547

PROJECT: Rochdale Road 2

TITLE: Level 09 GA Plan

SCALE (A0)	AUTHOR	DATE	REVISION	BKPL No.
1:50	CW	29.08.25	P02	15286

DRAWING REF: 15286-BKP-V1-09-DR-S-3009

Gravity Loading - Typical Upper Floors	
Dead Load	
250mm Flat Slab	6.25 kN/m^2
Latex Screed (2-5mm)	0.10 kN/m^2
Carpet & Underlay	0.05 kN/m^2
Ceiling & Services	0.50 kN/m^2
Total	6.90 kN/m^2
Imposed Load	
A2 Residential	1.50 kN/m^2
Partitions	1.00 kN/m^2
C31 Circulation	3.00 kN/m^2
Stairs & Landings	3.00 kN/m^2

Gravity Loading - Roof Terrace	
Dead Load	
250mm Flat Slab	6.25 kN/m^2
Alumasc Blue Roof	2.60 kN/m^2
Ceiling & Services	0.40 kN/m^2
Imposed Load	
A6 Terrace	3.00 kN/m^2

Cladding Loading (Applied every 2nd floor as a linear load)	
Dead Load	
Precast concrete cladding	21.00 kN/m

Note:

The initial scheme has been developed using charts and data from Economic Concrete Frame Elements to Eurocode 2. Preliminary member sizing is intended to present feasible options and provide first-order reinforcement estimates.

At detailed design stage, once comments are received and loading assumptions are confirmed, the scheme will be iterated to rationalise member sizes and ensure suitability for architectural and functional requirements.

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Concrete Columns				
Ref	Size	Reinforcement Est. 3%	Number	Concrete Grade
C1	900x300	480 kg/m^3	16	C60
C2	1000x300	480 kg/m^3	4	C60
C3	1300x300	455 kg/m^3	8	C60
C5	730x400	480 kg/m^3	4	C60

Flat Slab			
Ref	Depth	Reinforcement Est.	Concrete Grade
S1	250	170 kg/m^3	C50
S2	300	190 kg/m^3	C50

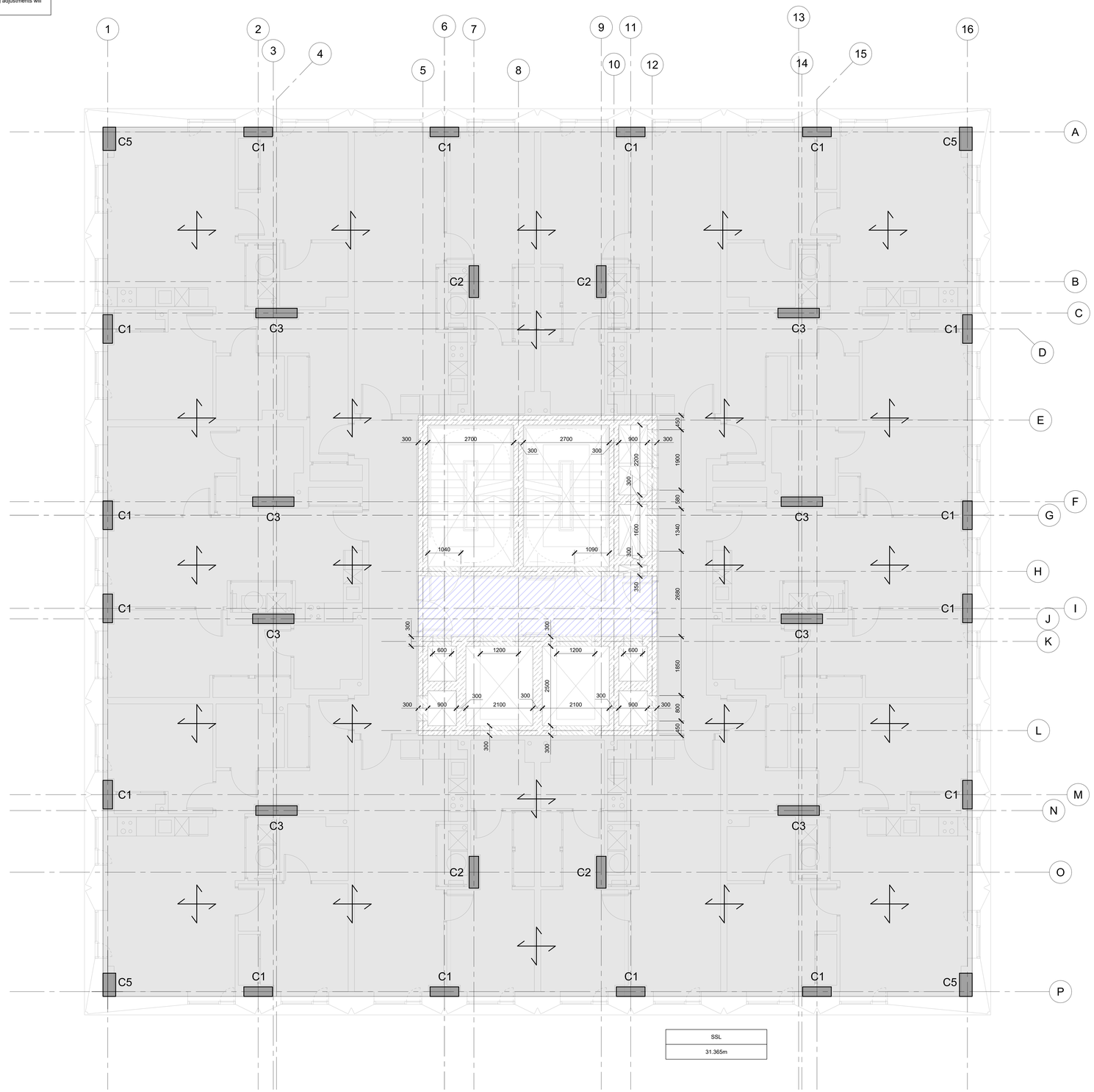
Core Walls		
Thickness	Reinforcement Est.	Concrete Grade
300mm Generally	65 kg/m^3	C60

Denotes span of S1 and S2 Flat slab.

Denotes extents of S1 Flat slab

Denotes extents of S2 Flat slab between stairs and lift cores

Denotes core walls



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REV.	DATE	REVISION DETAILS	INITIALS
P03	20.03.36	2a - Proposed Scheme Design Updated	TB
P02	02.09.25	2a - Proposed Scheme Design Updated	CW
P01	29.08.25	2a- Proposed Scheme Design	CW
		CURRENT DRAWING REVISION CHECKED BY	AA
		CURRENT DRAWING REVISION APPROVED BY	AA

DRAWING STATUS: S1

PROJECT STAGE: Stage 2

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PROJECT: Rochdale Road 2

TITLE: Level 10 GA Plan

SCALE (A0)	AUTHOR	DATE	REVISION	BKPL No.
1:50	CW	29.08.25	P03	15286

DRAWING REF: 15286-BKP-V1-10-DR-S-3010

Gravity Loading - Typical Upper Floors	
Dead Load	
250mm Flat Slab	6.25 kN/m^2
Latex Screed (2-5mm)	0.10 kN/m^2
Carpet & Underlay	0.05 kN/m^2
Ceiling & Services	0.50 kN/m^2
Total	6.90 kN/m^2
Imposed Load	
A2 Residential	1.50 kN/m^2
Partitions	1.00 kN/m^2
C31 Circulation	3.00 kN/m^2
Stairs & Landings	3.00 kN/m^2

Gravity Loading - Roof Terrace	
Dead Load	
250mm Flat Slab	6.25 kN/m^2
Alumasc Blue Roof	2.60 kN/m^2
Ceiling & Services	0.40 kN/m^2
Imposed Load	
A6 Terrace	3.00 kN/m^2

Cladding Loading (Applied every 2nd floor as a linear load)	
Dead Load	
Precast concrete cladding	21.00 kN/m

Note:

The initial scheme has been developed using charts and data from Economic Concrete Frame Elements to Eurocode 2. Preliminary member sizing is intended to present feasible options and provide first-order reinforcement estimates.

At detailed design stage, once comments are received and loading assumptions are confirmed, the scheme will be iterated to rationalise member sizes and ensure suitability for architectural and functional requirements.

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Initial stability and deflection checks have been carried out, but dynamic response to lateral loads and floor vibration assessments remain to be completed; results and any resulting adjustments will be issued to the design team.

Concrete Columns				
Ref	Size	Reinforcement Est. 3%	Number	Concrete Grade
C1	900x300	480 kg/m^3	16	C60
C2	1000x300	480 kg/m^3	4	C60
C3	1300x300	455 kg/m^3	8	C60
C5	730x400	480 kg/m^3	4	C60

Flat Slab			
Ref	Depth	Reinforcement Est.	Concrete Grade
S1	250	170 kg/m^3	C50
S2	300	190 kg/m^3	C50

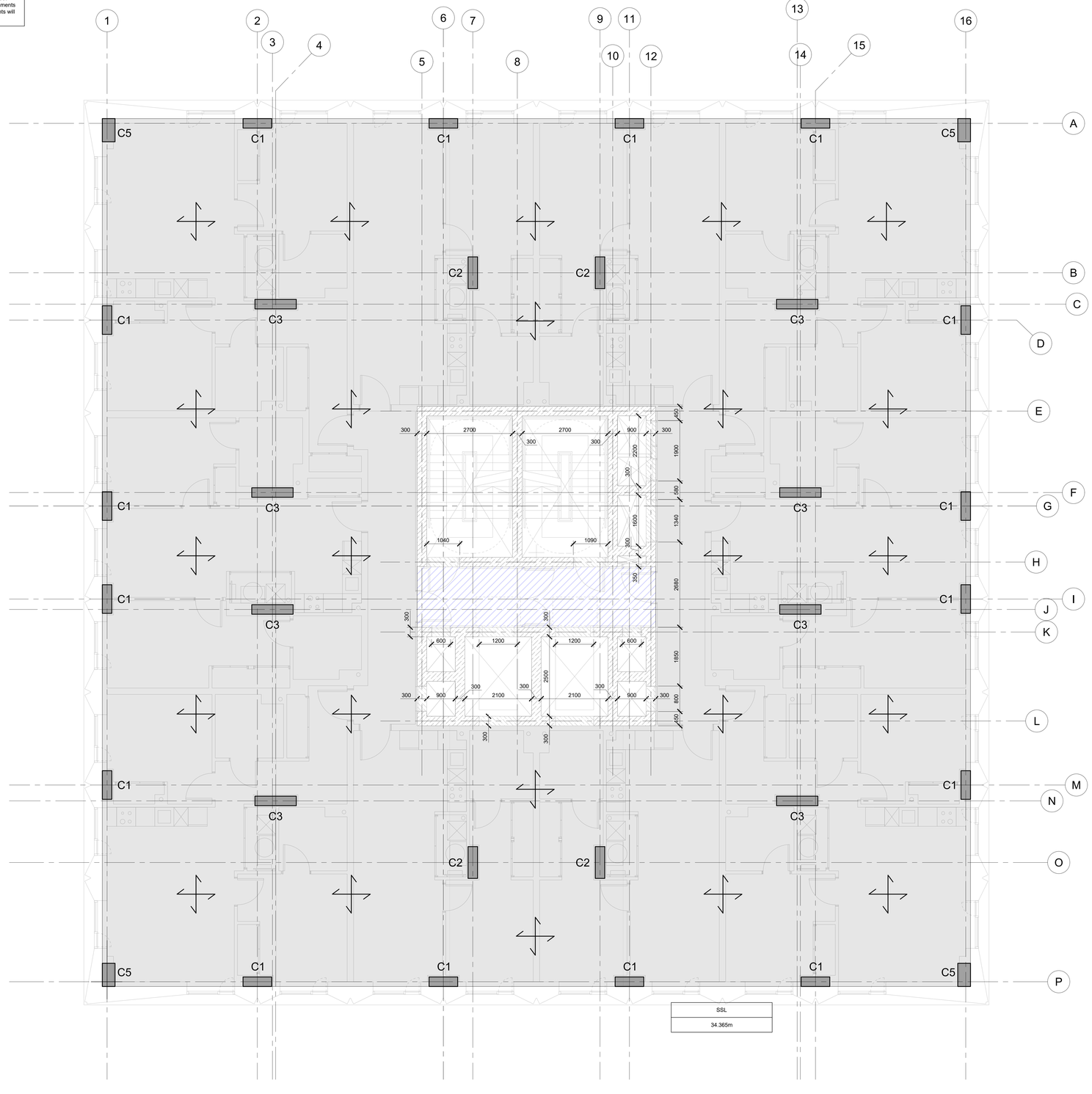
Core Walls		
Thickness	Reinforcement Est.	Concrete Grade
300mm Generally	65 kg/m^3	C60

Denotes span of S1 and S2 Flat slab.

Denotes extents of S1 Flat slab

Denotes extents of S2 Flat slab between stairs and lift cores

Denotes core walls



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REV.	DATE	REVISION DETAILS	INITIALS
P03	20.03.26	2a - Proposed Scheme Design Updated	TB
P02	02.09.25	2a - Proposed Scheme Design Updated	CW
P01	29.08.25	2a- Proposed Scheme Design	CW
		CURRENT DRAWING REVISION CHECKED BY	AA
		CURRENT DRAWING REVISION APPROVED BY	AA

DRAWING STATUS: S1

PROJECT STAGE: Stage 2

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PROJECT: Rochdale Road 2

TITLE: Level 11 GA Plan

SCALE (A0)	AUTHOR	DATE	REVISION	BKPL No.
1:50	CW	29.08.25	P03	15286

DRAWING REF: 15286-BKP-V1-11-DR-S-3011

Gravity Loading - Typical Upper Floors	
Dead Load	
250mm Flat Slab	6.25 kN/m^2
Latex Screed (2-5mm)	0.10 kN/m^2
Carpet & Underlay	0.05 kN/m^2
Ceiling & Services	0.50 kN/m^2
Total	6.90 kN/m^2
Imposed Load	
A2 Residential	1.50 kN/m^2
Partitions	1.00 kN/m^2
C31 Circulation	3.00 kN/m^2
Stairs & Landings	3.00 kN/m^2

Gravity Loading - Roof Terrace	
Dead Load	
250mm Flat Slab	6.25 kN/m^2
Alumasc Blue Roof	2.60 kN/m^2
Ceiling & Services	0.40 kN/m^2
Imposed Load	
A6 Terrace	3.00 kN/m^2

Cladding Loading (Applied every 2nd floor as a linear load)	
Dead Load	
Precast concrete cladding	21.00 kN/m

Note:

The initial scheme has been developed using charts and data from Economic Concrete Frame Elements to Eurocode 2. Preliminary member sizing is intended to present feasible options and provide first-order reinforcement estimates.

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Concrete Columns				
Ref	Size	Reinforcement Est. 3%	Number	Concrete Grade
C1	900x300	480 kg/m^3	16	C60
C2	1000x300	480 kg/m^3	4	C60
C3	1300x300	455 kg/m^3	8	C60
C5	730x400	480 kg/m^3	4	C60

Flat Slab			
Ref	Depth	Reinforcement Est.	Concrete Grade
S1	250	170 kg/m^3	C50
S2	300	190 kg/m^3	C50

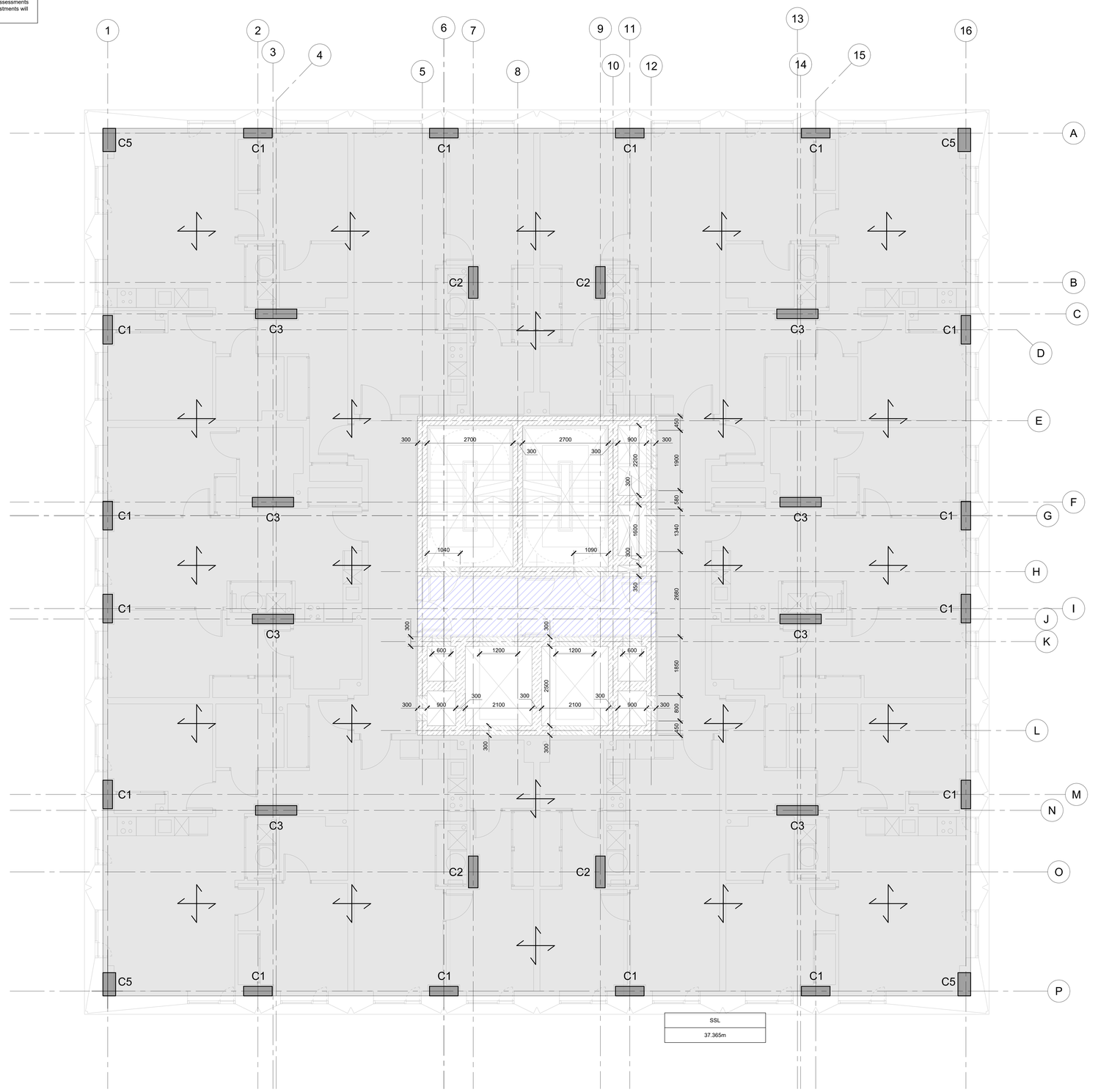
Core Walls		
Thickness	Reinforcement Est.	Concrete Grade
300mm Generally	65 kg/m^3	C60

Denotes span of S1 and S2 Flat slab.

Denotes extents of S1 Flat slab

Denotes extents of S2 Flat slab between stairs and lift cores

Denotes core walls



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REV.	DATE	REVISION DETAILS	INITIALS
P03	20.03.36	2a - Proposed Scheme Design Updated	TB
P02	02.09.25	2a - Proposed Scheme Design Updated	CW
P01	29.08.25	2a- Proposed Scheme Design	CW
		CURRENT DRAWING REVISION CHECKED BY	AA
		CURRENT DRAWING REVISION APPROVED BY	AA

DRAWING STATUS: S1

PROJECT STAGE: Stage 2

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PROJECT: Rochdale Road 2

TITLE: Level 12 GA Plan

SCALE (A0)	AUTHOR	DATE	REVISION	BKPL No.
1:50	CW	29.08.25	P03	15286

DRAWING REF: 15286-BKP-V1-12-DR-S-3012

Gravity Loading - Typical Upper Floors	
Dead Load	
250mm Flat Slab	6.25 kN/m^2
Latex Screed (2-5mm)	0.10 kN/m^2
Carpet & Underlay	0.05 kN/m^2
Ceiling & Services	0.50 kN/m^2
Total	6.90 kN/m^2
Imposed Load	
A2 Residential	1.50 kN/m^2
Partitions	1.00 kN/m^2
C31 Circulation	3.00 kN/m^2
Stairs & Landings	3.00 kN/m^2

Gravity Loading - Roof Terrace	
Dead Load	
250mm Flat Slab	6.25 kN/m^2
Alumasc Blue Roof	2.60 kN/m^2
Ceiling & Services	0.40 kN/m^2
Imposed Load	
A6 Terrace	3.00 kN/m^2

Cladding Loading (Applied every 2nd floor as a linear load)	
Dead Load	
Precast concrete cladding	21.00 kN/m

Note:

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Concrete Columns				
Ref	Size	Reinforcement Est. 3%	Number	Concrete Grade
C1	900x300	480 kg/m^3	16	C60
C2	1000x300	480 kg/m^3	4	C60
C3	1300x300	455 kg/m^3	8	C60
C5	730x400	480 kg/m^3	4	C60

Flat Slab			
Ref	Depth	Reinforcement Est.	Concrete Grade
S1	250	170 kg/m^3	C50
S2	300	190 kg/m^3	C50

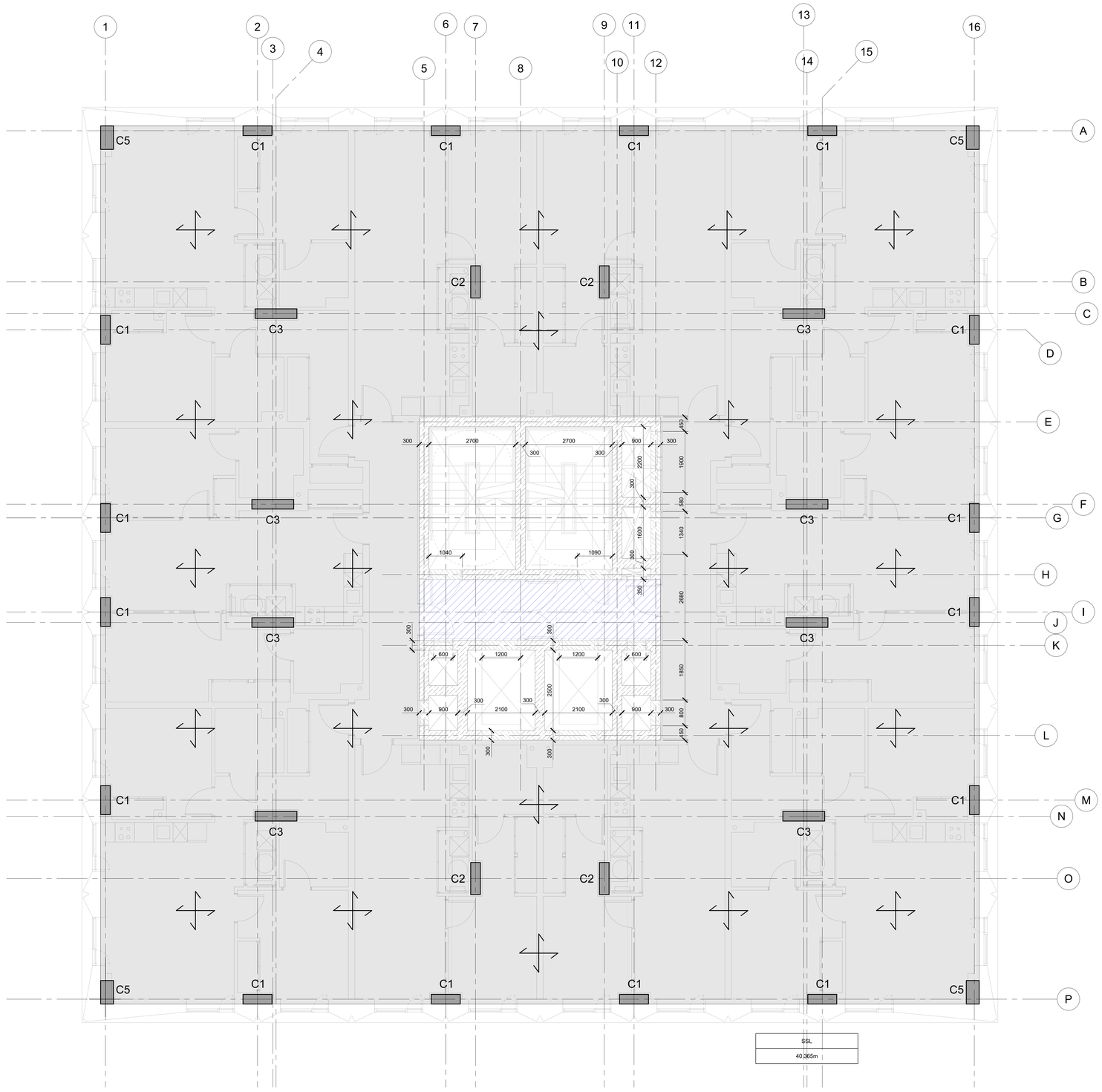
Core Walls		
Thickness	Reinforcement Est.	Concrete Grade
300mm Generally	65 kg/m^3	C60

Denotes span of S1 and S2 Flat slab.

Denotes extents of S1 Flat slab

Denotes extents of S2 Flat slab between stairs and lift cores

Denotes core walls



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REV.	DATE	REVISION DETAILS	INITIALS
P03	20.03.36	2a - Proposed Scheme Design Updated	TB
P02	02.09.25	2a - Proposed Scheme Design Updated	CW
P01	29.08.25	2a- Proposed Scheme Design	CW
		CURRENT DRAWING REVISION CHECKED BY	AA
		CURRENT DRAWING REVISION APPROVED BY	AA

DRAWING STATUS: S1

PROJECT STAGE: Stage 2

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RAMSBOTTOM Tel: 01706 822 022 | **MANCHESTER** Tel: 0161 694 7067 | **EDINBURGH** Tel: 0131 229 1547

PROJECT: Rochdale Road 2

TITLE: Level 13 GA Plan

SCALE (A0)	AUTHOR	DATE	REVISION	BKPL No.
1:50	CW	29.08.25	P03	15286

DRAWING REF: 15286-BKP-V1-13-DR-S-3013

Gravity Loading - Typical Upper Floors	
Dead Load	
250mm Flat Slab	6.25 kN/m^2
Latex Screed (2-5mm)	0.10 kN/m^2
Carpet & Underlay	0.05 kN/m^2
Ceiling & Services	0.50 kN/m^2
Total	6.90 kN/m^2
Imposed Load	
A2 Residential	1.50 kN/m^2
Partitions	1.00 kN/m^2
C31 Circulation	3.00 kN/m^2
Stairs & Landings	3.00 kN/m^2

Gravity Loading - Roof Terrace	
Dead Load	
250mm Flat Slab	6.25 kN/m^2
Alumasc Blue Roof	2.60 kN/m^2
Ceiling & Services	0.40 kN/m^2
Imposed Load	
A6 Terrace	3.00 kN/m^2

Cladding Loading (Applied every 2nd floor as a linear load)	
Dead Load	
Precast concrete cladding	21.00 kN/m

Note:

The initial scheme has been developed using charts and data from Economic Concrete Frame Elements to Eurocode 2. Preliminary member sizing is intended to present feasible options and provide first-order reinforcement estimates.

At detailed design stage, once comments are received and loading assumptions are confirmed, the scheme will be iterated to rationalise member sizes and ensure suitability for architectural and functional requirements.

Reinforcement quantities provided at this stage are budget estimates to support cost planning; these will be refined during detailed design to improve efficiency.

Initial stability and deflection checks have been carried out, but dynamic response to lateral loads and floor vibration assessments remain to be completed; results and any resulting adjustments will be issued to the design team.

Concrete Columns				
Ref	Size	Reinforcement Est. 3%	Number	Concrete Grade
C1	900x300	480 kg/m^3	16	C60
C2	1000x300	480 kg/m^3	4	C60
C3	1300x300	455 kg/m^3	8	C60
C5	730x400	480 kg/m^3	4	C60

Flat Slab			
Ref	Depth	Reinforcement Est.	Concrete Grade
S1	250	170 kg/m^3	C50
S2	300	190 kg/m^3	C50

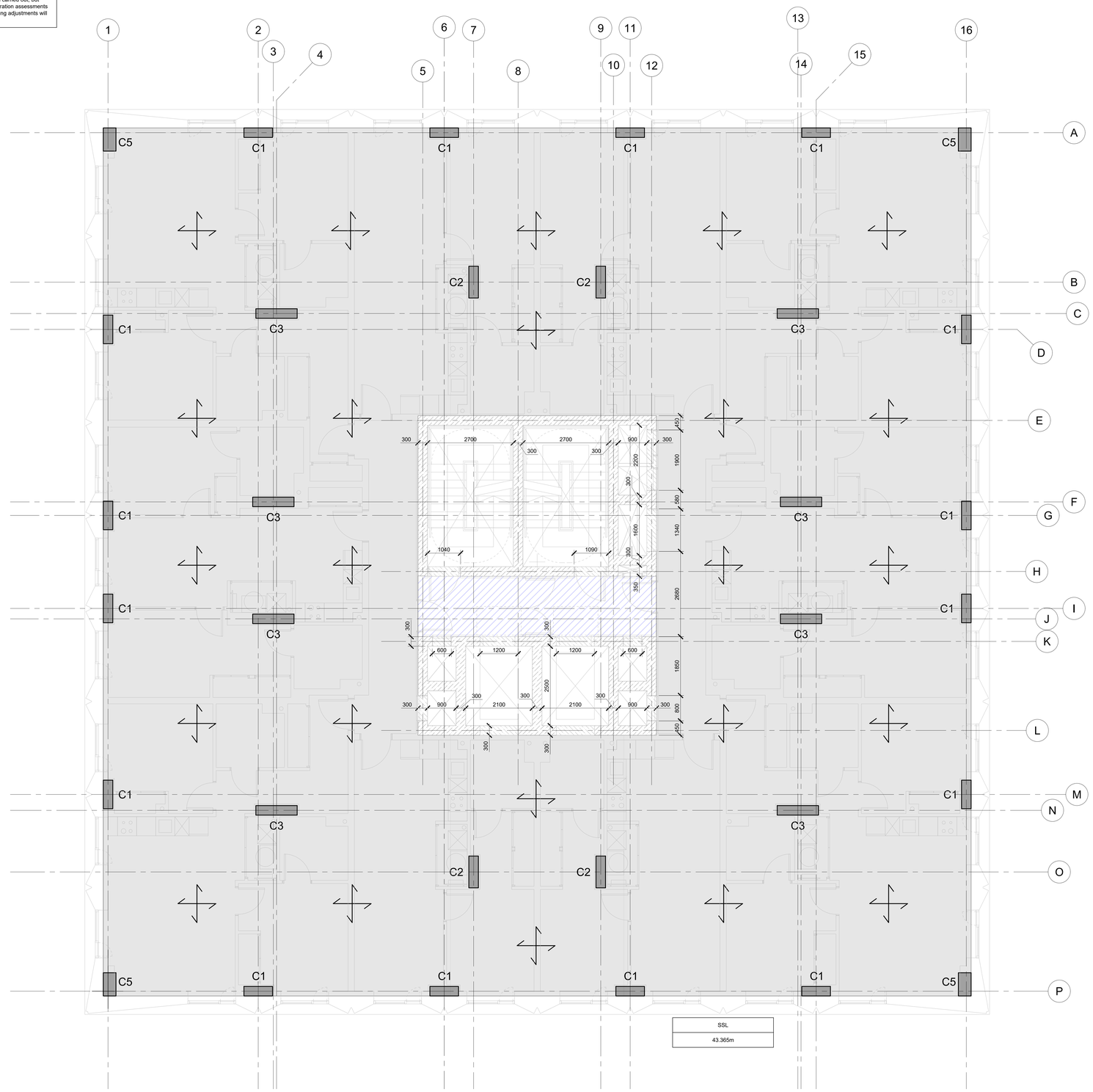
Core Walls		
Thickness	Reinforcement Est.	Concrete Grade
300mm Generally	65 kg/m^3	C60

Denotes span of S1 and S2 Flat slab.

Denotes extents of S1 Flat slab

Denotes extents of S2 Flat slab between stairs and lift cores

Denotes core walls



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8. This document uses status codes in accordance with ISO EN 19650: Work in progress: **S0** - WIP Shared (non-contractual): **S1** - Coordination, **S2** - Information, **S3** - Review, **S4** & **S5** - Approval. Published (contractual): **A1**, **An**, etc. (where "n" relates to the project stage)
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REV.	DATE	REVISION DETAILS	INITIALS
P03	20.03.36	2a - Proposed Scheme Design Updated	TB
P02	02.09.25	2a - Proposed Scheme Design Updated	CW
P01	29.08.25	2a- Proposed Scheme Design	CW
		CURRENT DRAWING REVISION CHECKED BY	AA
		CURRENT DRAWING REVISION APPROVED BY	AA

DRAWING STATUS: S1

PROJECT STAGE: Stage 2

booth king PARTNERSHIP LIMITED

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RAMSBOTTOM Tel: 01706 822 022 | **MANCHESTER** Tel: 0161 694 7067 | **EDINBURGH** Tel: 0131 229 1547

PROJECT: Rochdale Road 2

TITLE: Level 14 GA Plan

SCALE (A0)	AUTHOR	DATE	REVISION	BKPL No.
1:50	CW	29.08.25	P02	15286

DRAWING REF: 12586-BKP-V1-14-DR-S-3014

Gravity Loading - Typical Upper Floors	
Dead Load	
250mm Flat Slab	6.25 kN/m^2
Latex Screed (2-5mm)	0.10 kN/m^2
Carpet & Underlay	0.05 kN/m^2
Ceiling & Services	0.50 kN/m^2
Total	6.90 kN/m^2
Imposed Load	
A2 Residential	1.50 kN/m^2
Partitions	1.00 kN/m^2
C31 Circulation	3.00 kN/m^2
Stairs & Landings	3.00 kN/m^2

Gravity Loading - Roof Terrace	
Dead Load	
250mm Flat Slab	6.25 kN/m^2
Alumasc Blue Roof	2.60 kN/m^2
Ceiling & Services	0.40 kN/m^2
Imposed Load	
A6 Terrace	3.00 kN/m^2

Cladding Loading (Applied every 2nd floor as a linear load)	
Dead Load	
Precast concrete cladding	21.00 kN/m

Note:

The initial scheme has been developed using charts and data from Economic Concrete Frame Elements to Eurocode 2. Preliminary member sizing is intended to present feasible options and provide first-order reinforcement estimates.

At detailed design stage, once comments are received and loading assumptions are confirmed, the scheme will be iterated to rationalise member sizes and ensure suitability for architectural and functional requirements.

Reinforcement quantities provided at this stage are budget estimates to support cost planning; these will be refined during detailed design to improve efficiency.

Initial stability and deflection checks have been carried out, but dynamic response to lateral loads and floor vibration assessments remain to be completed; results and any resulting adjustments will be issued to the design team.

Concrete Columns				
Ref	Size	Reinforcement Est. 3%	Number	Concrete Grade
C1	900x300	480 kg/m^3	16	C60
C2	1000x300	480 kg/m^3	4	C60
C3	1300x300	455 kg/m^3	8	C60
C5	730x400	480 kg/m^3	4	C60

Flat Slab			
Ref	Depth	Reinforcement Est.	Concrete Grade
S1	250	170 kg/m^3	C50
S2	300	190 kg/m^3	C50

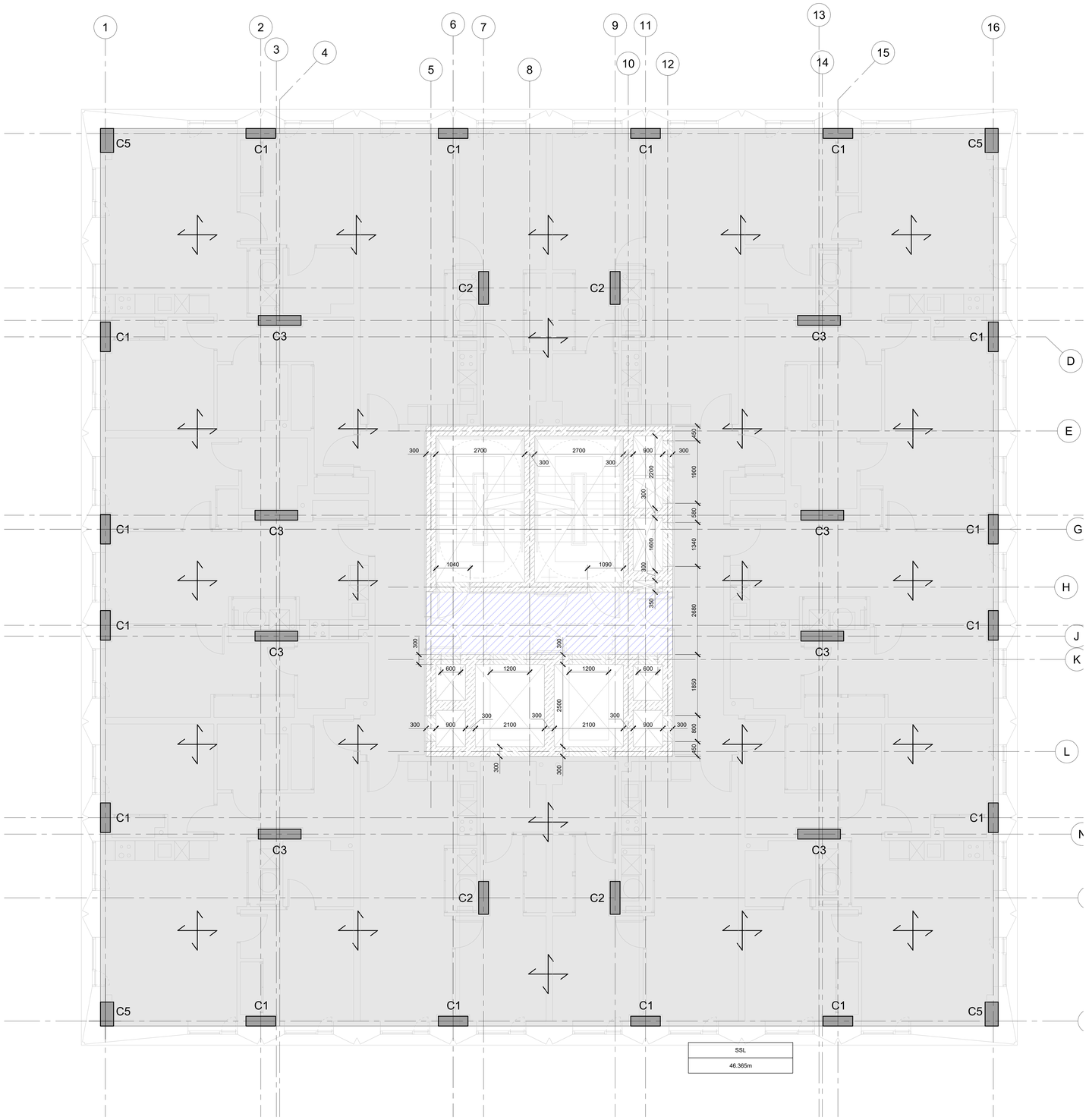
Core Walls		
Thickness	Reinforcement Est.	Concrete Grade
300mm Generally	65 kg/m^3	C60

Denotes span of S1 and S2 Flat slab.

Denotes extents of S1 Flat slab

Denotes extents of S2 Flat slab between stairs and lift cores

Denotes core walls



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REV.	DATE	REVISION DETAILS	INITIALS
P03	20.03.36	2a - Proposed Scheme Design Updated	TB
P02	02.09.25	2a - Proposed Scheme Design Updated	CW
P01	29.08.25	2a-Proposed Scheme Design	CW
		CURRENT DRAWING REVISION CHECKED BY	AA
		CURRENT DRAWING REVISION APPROVED BY	AA

DRAWING STATUS: S1

PROJECT STAGE: Stage 2

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PROJECT: Rochdale Road 2

TITLE: Level 15 GA Plan

SCALE (A0)	AUTHOR	DATE	REVISION	BKPL No.
1:50	CW	29.08.25	P02	15286

DRAWING REF: 15286-BKP-V1-15-DR-S-3015

Gravity Loading - Typical Upper Floors	
Dead Load	
250mm Flat Slab	6.25 kN/m^2
Latex Screed (2-5mm)	0.10 kN/m^2
Carpet & Underlay	0.05 kN/m^2
Ceiling & Services	0.50 kN/m^2
Total	6.90 kN/m^2
Imposed Load	
A2 Residential	1.50 kN/m^2
Partitions	1.00 kN/m^2
C31 Circulation	3.00 kN/m^2
Stairs & Landings	3.00 kN/m^2

Gravity Loading - Roof Terrace	
Dead Load	
250mm Flat Slab	6.25 kN/m^2
Alumasc Blue Roof	2.60 kN/m^2
Ceiling & Services	0.40 kN/m^2
Imposed Load	
A6 Terrace	3.00 kN/m^2

Cladding Loading (Applied every 2nd floor as a linear load)	
Dead Load	
Precast concrete cladding	21.00 kN/m

Note:

The initial scheme has been developed using charts and data from Economic Concrete Frame Elements to Eurocode 2. Preliminary member sizing is intended to present feasible options and provide first-order reinforcement estimates.

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Initial stability and deflection checks have been carried out, but dynamic response to lateral loads and floor vibration assessments remain to be completed; results and any resulting adjustments will be issued to the design team.

Concrete Columns				
Ref	Size	Reinforcement Est. 3%	Number	Concrete Grade
C1	900x300	480 kg/m^3	20	C60
C2	1000x300	480 kg/m^3	4	C60
C3	1300x300	455 kg/m^3	8	C60

Flat Slab			
Ref	Depth	Reinforcement Est.	Concrete Grade
S1	250	170 kg/m^3	C50
S2	300	190 kg/m^3	C50

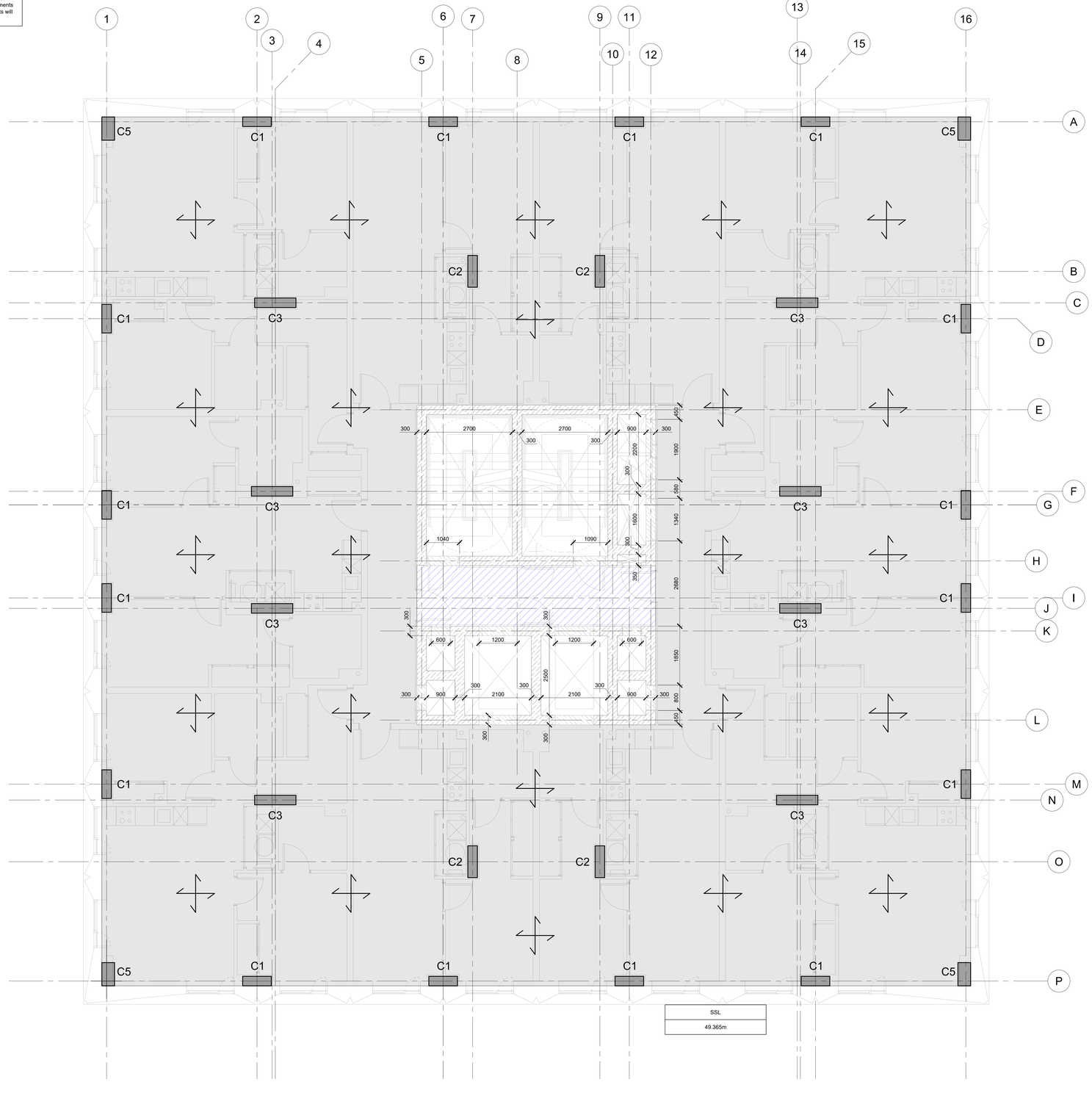
Core Walls		
Thickness	Reinforcement Est.	Concrete Grade
300mm Generally	65 kg/m^3	C60

Denotes span of S1 and S2 Flat slab.

Denotes extents of S1 Flat slab

Denotes extents of S2 Flat slab between stairs and lift cores

Denotes core walls



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REV.	DATE	REVISION DETAILS	INITIALS
P03	20.03.36	2a - Proposed Scheme Design Updated	TB
P02	02.09.25	2a - Proposed Scheme Design Updated	CW
P01	29.08.25	2a-Proposed Scheme Design	CW
		CURRENT DRAWING REVISION CHECKED BY	AA
		CURRENT DRAWING REVISION APPROVED BY	AA

DRAWING STATUS: S1

PROJECT STAGE: Stage 2

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PROJECT: Rochdale Road 2

TITLE: Level 16 GA Plan

SCALE (A0)	AUTHOR	DATE	REVISION	BKPL No.
1:50	CW	29.08.25	P02	15286

DRAWING REF: 15286-BKP-V1-16-DR-S-3016

Gravity Loading - Typical Upper Floors	
Dead Load	
250mm Flat Slab	6.25 kN/m²
Latex Screed (2-5mm)	0.10 kN/m²
Carpet & Underlay	0.05 kN/m²
Ceiling & Services	0.50 kN/m²
Total	6.90 kN/m²
Imposed Load	
A2 Residential	1.50 kN/m²
Partitions	1.00 kN/m²
C31 Circulation	3.00 kN/m²
Stairs & Landings	3.00 kN/m²

Gravity Loading - Roof Terrace	
Dead Load	
250mm Flat Slab	6.25 kN/m²
Bauder Blue Roof	2.60 kN/m²
Ceiling & Services	0.40 kN/m²
Imposed Load	
A6 Terrace	3.00 kN/m²

Cladding Loading (Applied every 2nd floor as a linear load)	
Dead Load	
Precast concrete cladding	21.00 kN/m

Note:

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Concrete Columns				
Ref	Size	Reinforcement Est. 3%	Number	Concrete Grade
C1	900x300	480 kg/m³	16	C60
C2	1000x300	480 kg/m³	4	C60
C3	1300x300	455 kg/m³	8	C60
C5	730x400	480 kg/m³	4	C60

Flat Slab			
Ref	Depth	Reinforcement Est.	Concrete Grade
S1	250	170 kg/m³	C50
S2	300	190 kg/m³	C50

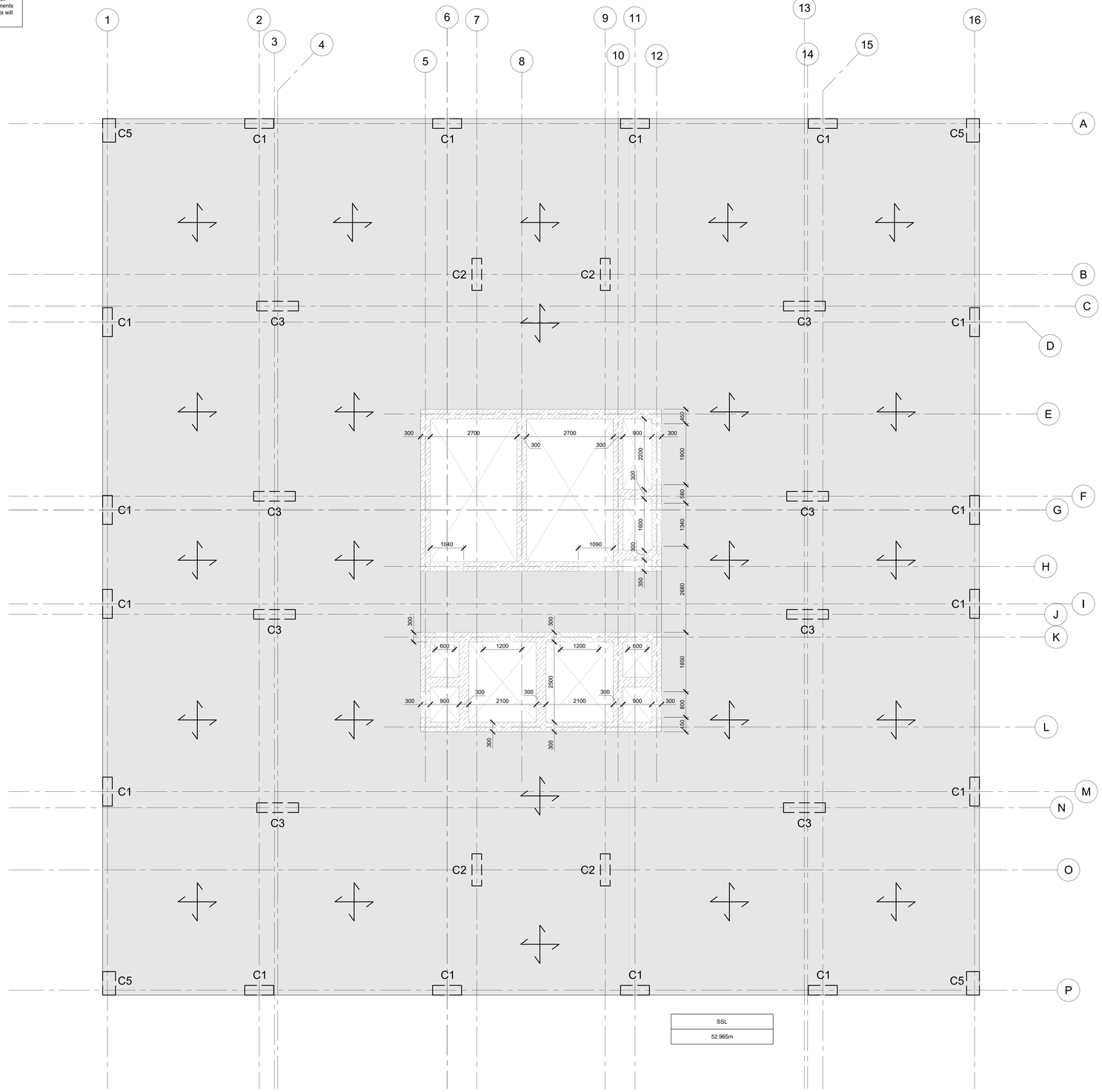
Core Walls		
Thickness	Reinforcement Est.	Concrete Grade
300mm Generally	65 kg/m³	C60

Denotes span of S1 and S2 Flat slab.

Denotes extents of S1 Flat slab

Denotes extents of S2 Flat slab between stairs and lift cores

Denotes core walls



SSL
52.965m

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REV.	DATE	REVISION DETAILS	INITIALS
P03	20.03.36	2a - Proposed Scheme Design Updated	TB
P02	02.09.25	2a - Proposed Scheme Design Updated	CW
P01	29.08.25	2a-Proposed Scheme Design	CW
		CURRENT DRAWING REVISION CHECKED BY	AA
		CURRENT DRAWING REVISION APPROVED BY	AA

DRAWING STATUS: S1

PROJECT STAGE: Stage 2

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PROJECT: Rochdale Road 2

TITLE: Roof GA Plan

SCALE (A0)	AUTHOR	DATE	REVISION	BKPL No.
1:50	CW	29.08.25	P03	15286

DRAWING REF: 15286-BKP-V1-17-DR-S-3017

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Company No. 06206269

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Constructionline Gold Member

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