

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

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

| 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 <sup>3</sup> | 16     | C60            |
| C2               | 1000x300 | 480 kg/m <sup>3</sup> | 4      | C60            |
| C3               | 1300x300 | 455 kg/m <sup>3</sup> | 8      | C60            |
| C4               | 600x450  | 480 kg/m <sup>3</sup> | 4      | C60            |

| Ground Bearing Slab |       |                       |                |
|---------------------|-------|-----------------------|----------------|
| Ref                 | Depth | Reinforcement Est.    | Concrete Grade |
| S1                  | 250   | 170 kg/m <sup>3</sup> | C30            |

| Core Walls      |                       |                |
|-----------------|-----------------------|----------------|
| Thickness       | Reinforcement Est.    | Concrete Grade |
| 300mm Generally | 120 kg/m <sup>3</sup> | C60            |

 Denotes core walls

