



December 2021 Permission: Level 12 Floor Plan.



S96A Proposal: Level 12 Floor Plan - BOLAN-AAM-BA-22-DP-AR-07112



December 2021 Permission: Level 13-21 Floor Plan.



S96A Proposal: Level 13-21 Floor Plan - BOLAN-AAM-BA-22-DP-AR-07113



December 2021 Permission: Level 22-23 Floor Plan.



NB:
The S96A amends the Level 22-23 floor plan and Level 24 floor plan to be Level 22 floor plan and Level 23-24 floor plan.

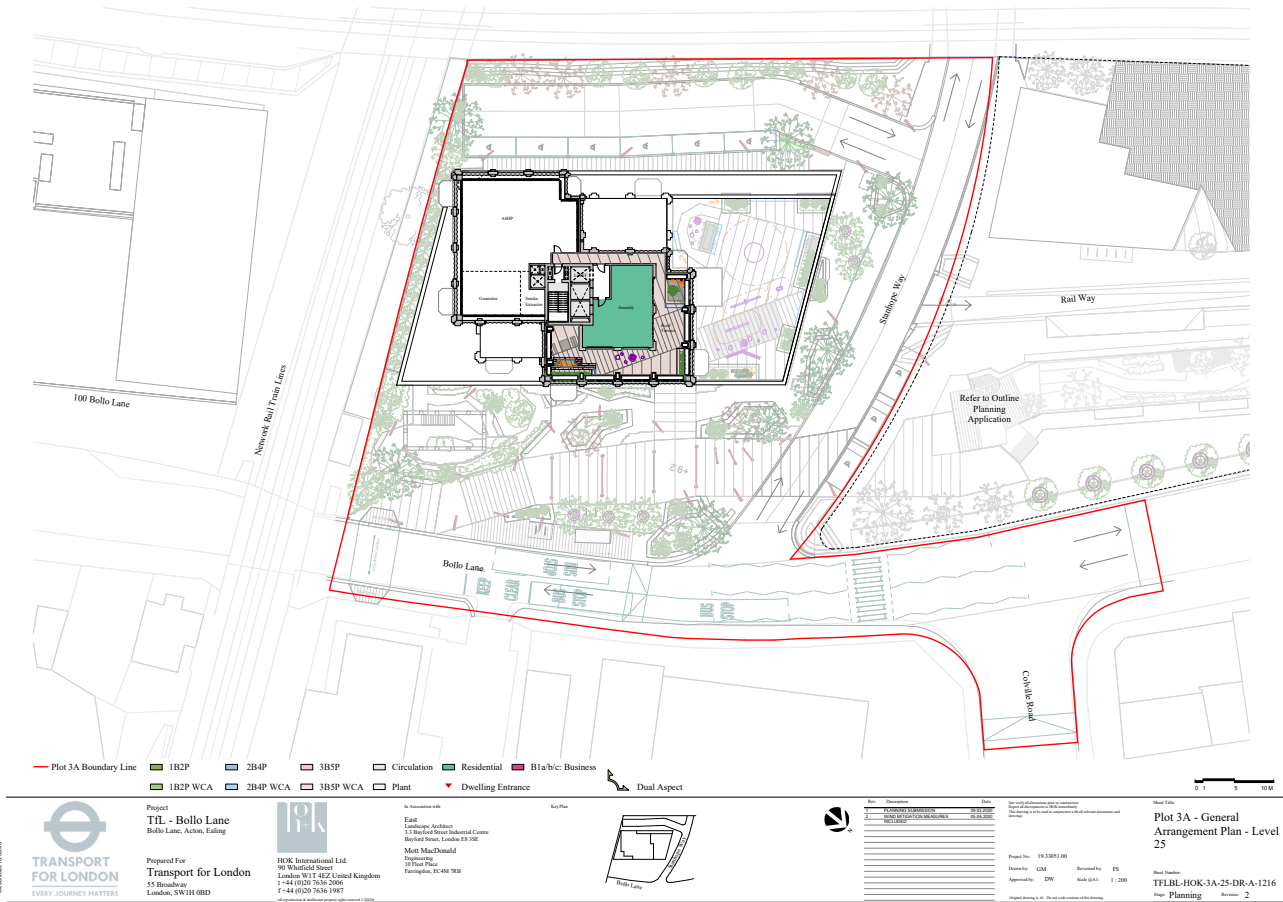
S96A Proposal: Level 22 Floor Plan - BOLAN-AAM-BA-22-DP-AR-07122



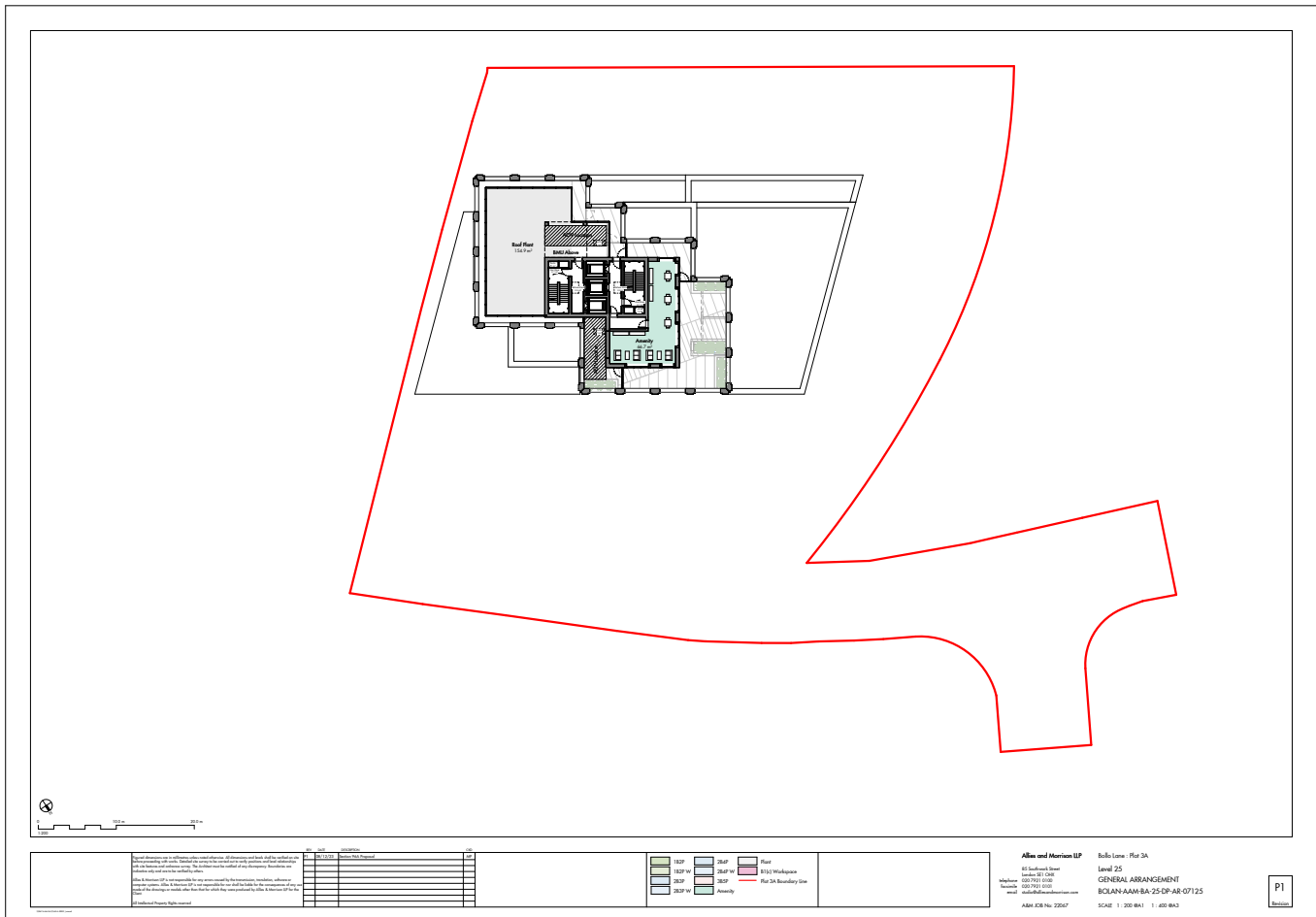
December 2021 Permission: Level 24 Floor Plan.



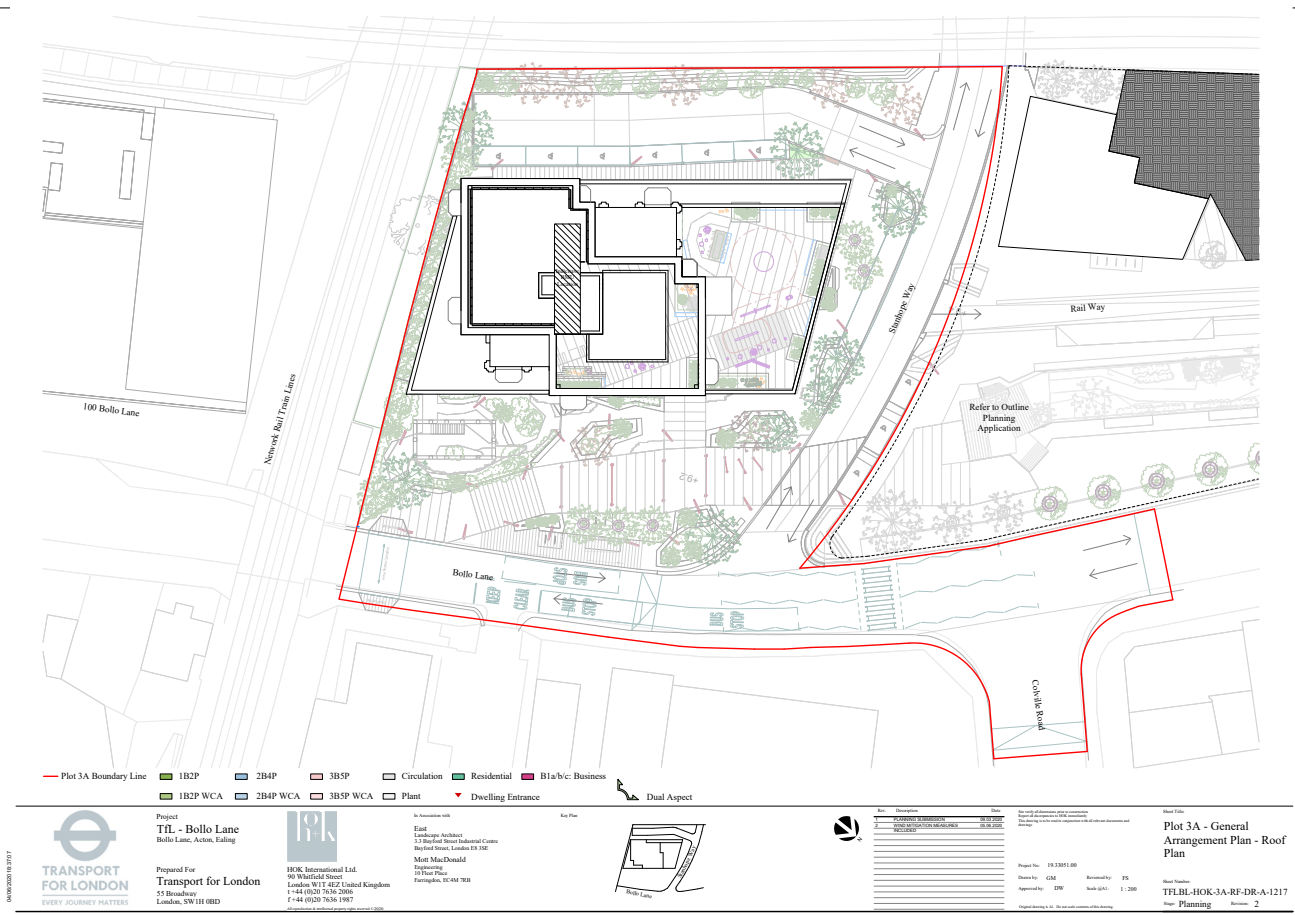
S96A Proposal: Level 23-24 Floor Plan - BOLAN-AAM-BA-26-DP-AR-07124



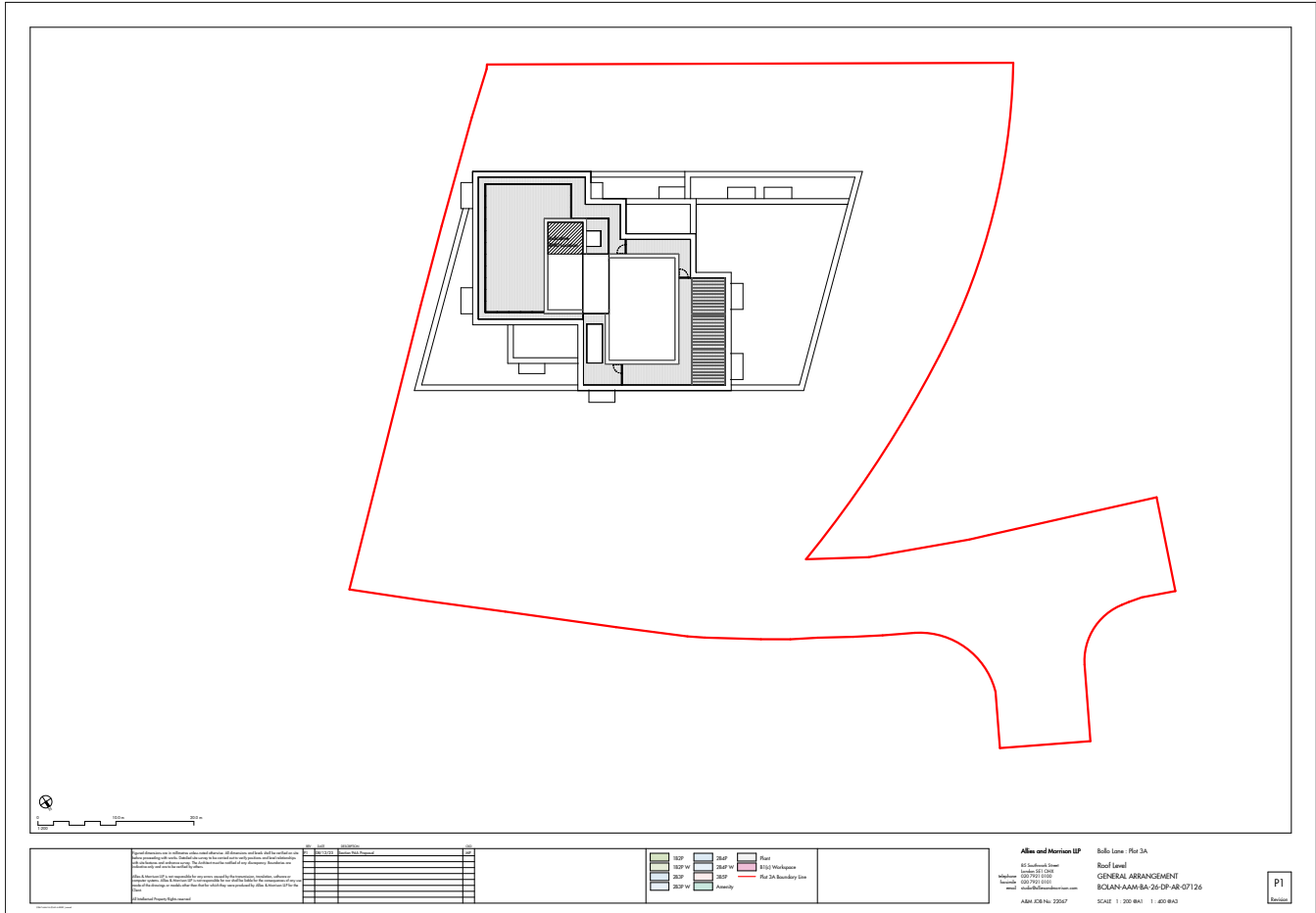
December 2021 Permission: Level 25 Floor Plan.



S96A Proposal: Level 25 Floor Plan - BOLAN-AAM-BA-26-DP-AR-07125



December 2021 Permission: Roof Level Floor Plan.



S96A Proposal: Roof Level Floor Plan - BOLAN-AAM-BA-26-DP-AR-07126



2.5 Facade

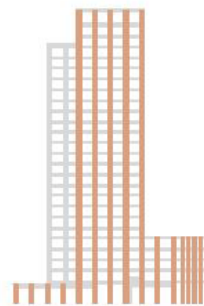
Thermal Performance

The 2021 Permission is wrapped in a simple and evenly spaced masonry grid, which provides a coherency to the glazed openings that sit within. The grid is composed with two main elements:

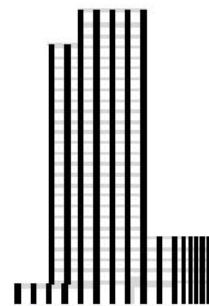
- Vertical expressed brick piers;
- Horizontal masonry beams.

The brick piers are 1227.5mm wide and cover the whole building at 4.5m centres.

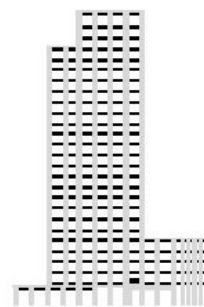
The composition provides a clear, vertical ordering to the building which is composed in two tones of red buff brick and light masonry.



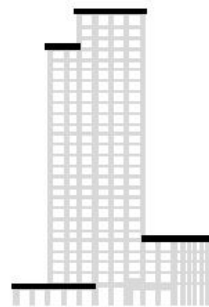
Vertical Brick Piers Tone



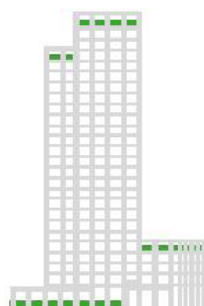
Vertical Brick Piers



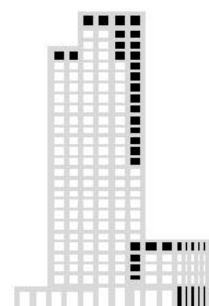
Horizontal Concrete Lintels



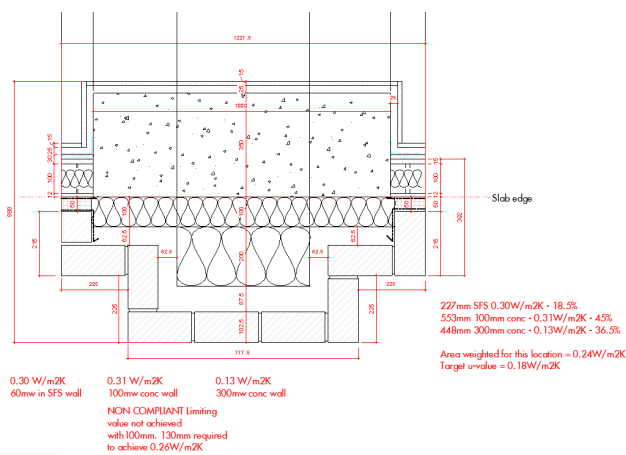
Horizontal Concrete Lids



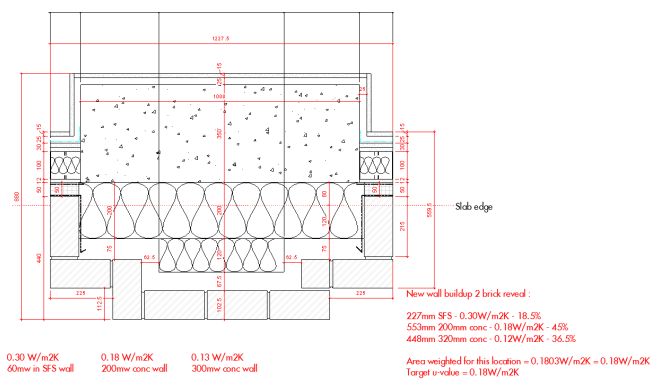
Gardens



Facade Voids



December 2021 Permission: Typical brick pier.



S96A Proposal: Typical brick pier.

The 2021 Permission incorporates a stepped, two-brick reveal to the pier at 4.5m centres and coordinated with the structural frame behind. This pier design and presence of structural frame leaves an insufficient zone for insulation; unable to achieve the minimum Limiting Value and the required U-value of 0.18W/m2k.

Through design development it has been necessary to increase the cavity to incorporate a minimum 200mm of mineral wool insulation to achieve the designated thermal performance for the building. The proposal reconfigures the two-bricks to the pier design to meet the thermal performance of targets.



Overheating

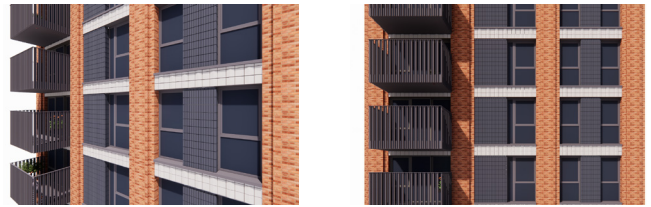
The 2021 Permission incorporated a number of measures applied in line with the Cooling Hierarchy (Option 3) to mitigate against overheating of apartments, including solar control glazing, internal shutters, exposed thermal massing and increased air changes per hour through a MVHR system.

The TM59 results indicated that none of the assessed residential units meet the TM59 criterion for any of the options tested and it was expected that provision for cooling will be included in the design of the residential units to address the risk of overheating.

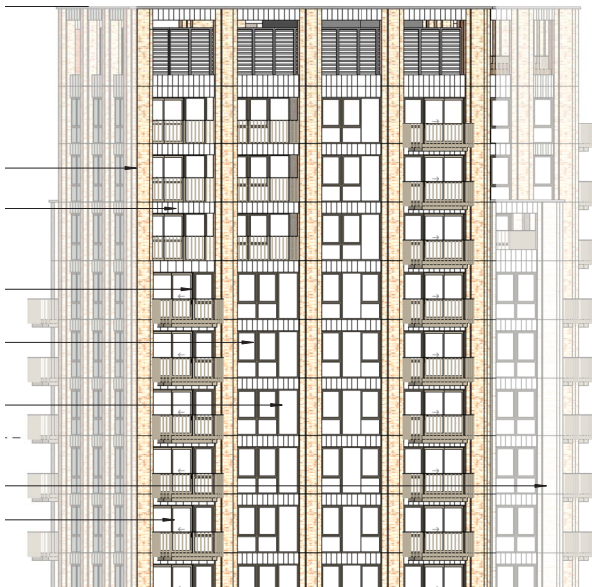
The 2021 Permission incorporated large expanses of glazed facade to residential accommodation - typically measuring over 3.2m in width and 2.5m high - and including two of these windows to a living room with a south-westerly aspect.

Resultingly, many rooms and apartments failed to meet the maximum permissible temperatures by a significant margin.

It was also considered that the proposed mitigation for internal shutters to all residential windows, fixed to provide no greater than 40% open perforation would be detrimental to the lived experience of residents.



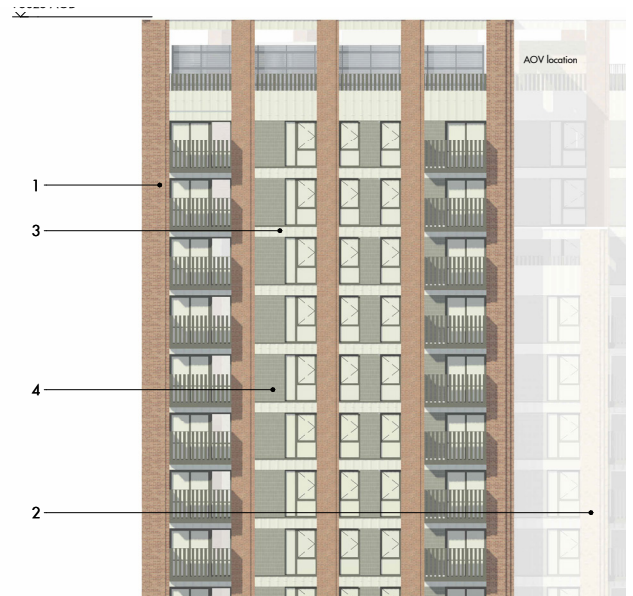
S96A Proposal: Masonry infill panels.



December 2021 Permission: South East Elevation

The S96A Proposal has sought to address the thermal performance of the building fabric and the overheating of the residential accommodation within, whilst retaining the simple and evenly spaced masonry grid of vertical expressed brick piers with horizontal masonry beams.

In coordination with the amendments to the fire strategy, apartment layouts and thermal performance the S96A Proposal has developed to reduce the extent of glazing where appropriate and incorporate a masonry infill panel to increase the amount of insulated wall within the scheme.



S96A Proposal: South East Elevation

The masonry infill is conceived of a stack bonded, engineering brick panel that is aligned 25mm back from the face of the stepped brick pier. The brick colour, bond and alignment has been designed to be read as separate to the brickwork of the vertical piers and horizontal beams.

The infill panel simultaneously reduces the extent of glazing and associated internal heat gains whilst increasing the extent of insulated wall improving the thermal performance of the building fabric.