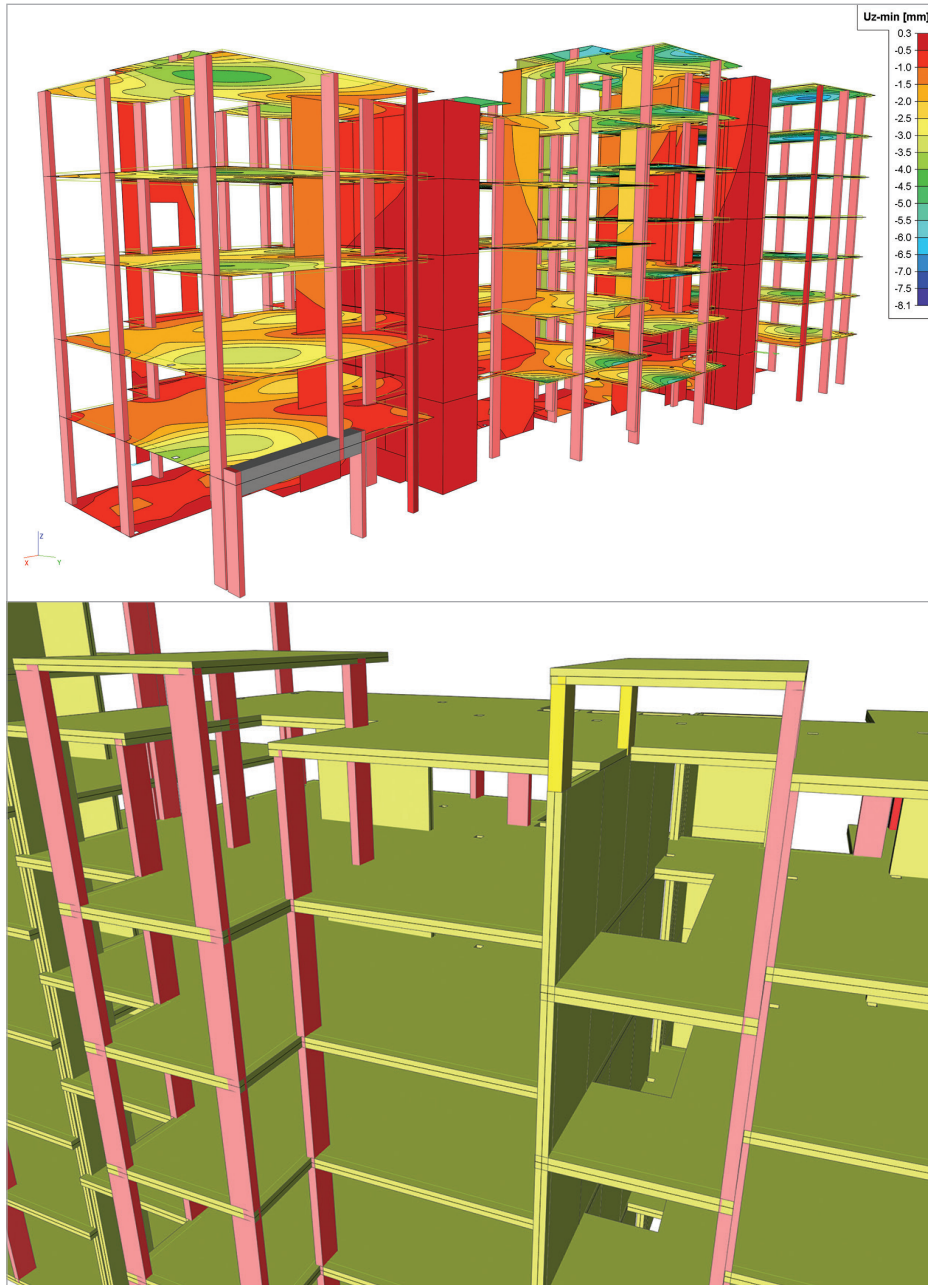


Allen Court Block 2 - Ealing, United Kingdom



Allen Court Block 2, is a relatively straightforward RC framed building. Up to 8 storeys high with 250 mm thick reinforced concrete flat slabs and generally 600 x 200 mm columns. The bottom levels of columns, up from foundations to underside of 1st, have to be designed to cater for impact loading, as some of the lower level is to be accessed by vehicles, therefore we increased the thickness of these columns by 50 mm for increased cover. The size and shape of the building is long and narrow, we therefore had to ensure there were enough shear walls for stability and to counteract any wind loadings that may occur. There are several concrete balconies at each level, these are supported using a thermal break system, and the design of these balconies has also been carried out on Scia Engineer.

We used Scia Engineer to design the flat slabs, column loads, slab moments, areas of steel and stability in the core walls. This gave us enough information to design the foundation loadings, to which we had a tight deadline to enable the client to procure the site.

Block 2 is 1 of 3 blocks, Block 1 is similar in construction to Block 2 and Block 3 is a loadbearing masonry construction, based on traditional build and piled ground beams for the foundations.

We use the Scia Engineer program to enable us to mark up the steel areas for reinforcement, we get our reinforcement drawings for larger projects done out of house, to enable us to concentrate closer on the design. We use the steel areas combined with the slab moments to give us the required reinforcement to the slab area. The column loads help us to determine the amount of punching shear required. The column loads can easily be differentiated into serviceability loads for foundation design and ultimate loads for column and punching shear designs.

We have worked very closely with the architect and main client on this project, to enable us to forward our design principles with accuracy and speed, whilst still ensuring correct design procedures. We schemed up and tendered for this project several months ago, and used the Scia program to back up our tendered

estimates at the early stages, and implement any changes, client or architectural, for the construction issue.

This project has not been started on site currently, and a start on site date for May 2013 has been imposed. We are preparing any necessary design and detailed information to ensure that the start on site date is achievable and that any delays that may occur are kept to a minimum.

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We are a structural and civil engineering consultants based in Basildon, Essex. Our projects range from small housing estates to multi-storey RC framed buildings. We also design in the other structural disciplines, such as timber, steel and masonry. We have a very good client base and we ensure all our projects run as smoothly as possible.

Project information

Owner	Linden Homes
Architect	HTA
General Contractor	Linden Homes
Engineering Office	Linden Homes
Location	Ealing, United Kingdom
Construction Start	05/2013

Short description | Allen Court Block 2

Allen Court is an RC framed building, consisting of 250 mm thick floor slabs and generally 600 x 200 mm columns. The core walls provide the stability of the building. The foundations are piles and pile caps to support the structure at columns and shear wall locations. There is a masonry external leaf and a lightweight inner leaf. There are several balconies at all levels which are connected to the slab using a thermal break system.

