

LARGE RESIDENTIAL PROJECT POSES UNUSUAL CHALLENGES



This large private residence in Cheshire posed an unusual set of challenges for Rhodes & Partners.

These centered on the need for a structural design which could accommodate a number of very large open spaces which feature on the ground floor of the architect's design. The client also required the design to include heavyweight concrete block walls at first floor level that were largely non-loadbearing, as this would provide greater flexibility for alterations in the future.

To achieve this, Rhodes & Partners combined both precast concrete beams and blocks with steel posts concealed within the masonry structure which would support localized heavy point loads. This innovative and unconventional approach to a residential property allowed the open spaces to be retained while still providing the necessary levels of support for all parts of the large property.

A carefully detailed approach to the structural design was the key to the success of this project, as many different elements had to be integrated and made to work together, despite some parts of the building offering very limited space in which to achieve this. The first floor features precast concrete beam and block flooring which spans areas of up to 14 mts x 6 mts, with steel posts and a partially steel-framed roof.



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