Hale Allen Jones

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At Hale Allen Jones we have provided a quality engineering consultancy to the construction industry for over 35 years. Our experience and knowledge of Structural, Civil and Highway Engineering enables us to offer an excellent service to Developers, Contractors, Individual Clients, Architects and Surveyors.

The Practice originally dates back to 1968 with the current Practice being formed in 1986 by the merger of two established firms, Eagling & Allen and Hale & Associates and therefore there has been a continuous involvement in Consulting Engineering since 1968.

Over the years the Practice has gained expertise in many fields of Engineering with Partners and staff having undertaken commissions in all areas of work.

The nature of the commissions has ranged from a partial service to a complete service including design and construct works and total management of multi-disciplined Engineering contracts. Also, the Practice has been involved in emergency stabilising works and specialist advice.

As well as general work as Consulting Engineers the Practice undertakes work as Expert Witnesses, Planning Supervisors for the Health and Safety CDM Regulations and also acting as Party Wall Surveyors under the Party Wall etc Act 1996.

The Practice maintains a suite of the latest computer analysis, design and drawing programmes enabling complex structures and problems to be quickly and rapidly assessed and drawn. This includes all aspects of structural, civil, highway and drainage design.

All projects have the involvement of one or more of the Partners or Associate and they are involved in the day to day Engineering and administration of the projects. Technical staff are allocated to an individual project as required.

There is a regular appraisal of work in the office and we have our own Engineering and Management Control Systems.

To comply with the CDM Regulations full Designer Risk Assessments are carried out on every project with a system for carrying out the necessary checks.

Short Description

Long Lane Project, London

The development in Central London is a mixture of commercial, residential and affordable housing with naturally ventilated car park accommodation in the basement.
The ground floor is a mixture of glass and dark masonry which is set back behind the lines of the upper floors which are cantilevered out. The upper floors have a mixture of offset rendered panels and timber cladding which form balconies which reduces the mass of the 8 storey structure and breaks it up into distinct elements. The top floor penthouse is set back from the floor below but at this level is metal clad.

Project Information

Owner: Galliard Homes Ltd
Architect: GLAS Ltd & Galliard Homes Ltd
General Contractor: Galliard Construction Ltd
Engineering Office: Hale Allen Jones

Construction Start: 01/2005
Construction End: 09/2007
Location: 193-197 Long Lane,
Bermondsey, London, United Kingdom

An RC framed structure in Central London to provide Private and Affordable Housing with Commercial accommodation at Ground Floor and Mezzanine floor level, with a naturally ventilated Basement Car Park facility. Scia software was eventually sourced and appealed as being the most suitable design suite for the design of this project.

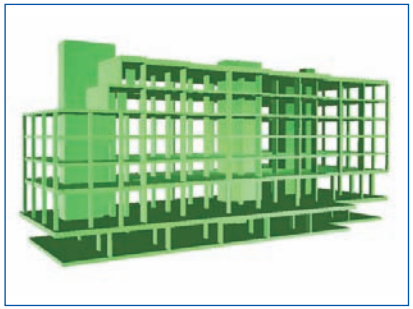
Background

The site was formally occupied by a warehouse that was demolished to make way for the new development on Long Lane which is generally undergoing a period of unprecedented redevelopment. The development is a mixture of commercial, residential and affordable housing with car park accommodation in the basement.

The Planners were keen to reintroduce a frontage to the road and the building therefore abuts the street. The site is essentially rectangular with non parallel sides with the narrow end nearest to the street. The building is 'L' shaped with the base of the 'L' forming the edge of the street and the tail extending full depth into the site.

The ground floor is a mixture of glass and dark masonry which is set back behind the lines of the upper floors which are cantilevered out. The upper floors have a mixture of offset rendered panels and timber cladding which form balconies which reduces the mass of the 8 storey structure and breaks it up into distinct elements. The top floor penthouse is set back from the floor below but at this level is metal clad.

Scia software was eventually sourced and appealed as being the most suitable design suite for the design of this project. The structure was supported on 450 diameter piles 25m long taken into the London Clay beds. From these pile caps where designed to support the stair and lift core walls at ground floor



Used software: Scia Engineer, ESA-Prima Win

level and the RC columns at basement level. The main structure is of reinforced concrete framed construction with flat slab transition structures at ground floor above the basement car park and at first floor supported by RC cross walls. Circular columns are built off the ground floor flat slab which where then checked using Scia Engineer for punching shear and again the upper flat slab floors are supported on rectangular columns which were also subject to punching shear checks.

The lateral loads from wind forces are designed in a separate analysis to be carried entirely by three stair and lift cores with the columns designated as pin ended for this exercise to ensure they attract no wind moment which is then all taken by he shear walls of the main stair cores. The stair and lift cores are evenly distributed throughout the length of the structure which allows reasonable distribution of the wind and shear forces that result around the plan area of the structure.

The basement has a perimeter contiguous piled wall which is internally faced with a retaining wall designed to keep out ground water but is drained of any rainwater via a sump. The external access opening for vehicles prevents protection of the basement to a serious flood but is considered to offer a reasonable defence for all but the most extreme flood conditions.

The original reinforcement estimates from the early analysis, given at tender stage gave a reasonable indication of reinforcement weights at tender stage and were acceptable for use in a design and construct project, subject to variation during the construction stages.

It was found that last minute requests for addition duct capacity for services could be responded to efficiently and their implications could be fully checked out at short notice prior to the concrete pours proceeding. Such requests are not normally easily accommodated at short notice but the software was able to deal with these requests efficiently and it did not create too much of an issue.

Schedules for issue of information were consistently complied with and met and the project was progressed without delays and was completed ahead of program.