

Our involvement in offsite construction



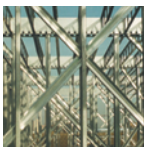
Volumetric Modular

Apollo Offsite adhesives have helped to transform the assembly processes of many of the leading manufacturers of volumetric modular buildings and temporary accommodation, providing more efficient application systems and better designed products.



Pods

With a desire to imitate mass production techniques, Apollo Offsite has transferred vast knowledge and experience to leading pod manufacturers. This technology transfer has helped to reduce production cycles and increase production volumes.



Light Steel Frame (LSF)

By developing a number of product solutions Apollo Offsite is working with leading LSF suppliers to tackle the challenges of providing more cost effective methods of assembly, acoustic performance, air-tightness, structural efficiency and weight reduction.



Timber Frame

Apollo Offsite is involved with working with companies developing innovative forms of timber frame construction such as low energy solutions and closed panel technologies.



Precast Concrete

Apollo Offsite has helped to transform the onsite assembly process for some of the leading manufacturers in the Precast sector, providing more efficient application systems and better quality products.



Insulated Concrete Formwork (ICF)

Apollo Offsite is working to tackle the challenges of applying external finishes such as brick slips directly to the outer face of ICF and manufactured wall elements.



Structural Insulated Panel Systems (SIPS)

SIPS Technology is one of the fastest growing offsite systems and is becoming more popular due to its sustainability and in-service performance credentials. Growing demand increases the pressure to produce SIPS solutions and Apollo Offsite are involved in the development of the next generation SIPS technology.



Mechanical & Electrical (M&E)

New materials and fixing methods are the current challenges in the M&E sector and Apollo Offsite is helping to address these issues with a range of solutions including plant rooms and roof-top plant enclosures.



Volumetric Modular Case Study

The Client

Elliott Group is one of Europe's leading manufacturers of volumetric modular building systems. The company supplies a wide array of sectors including Commercial, Leisure, Education and Healthcare.

Elliott Group saw the potential to apply its expertise to the development of volumetric modular building technology for the UK housing market and decided to develop a product that would be branded 'eHouse'.

The eHouse solution was to radically challenge the convention of delivering residential accommodation and as such the system development brief dictated that over 90% of the construction process associated with housing delivery would be brought in to a manufacturing environment.

This aspiration dictated that the eHouse system should be delivered complete with an external brick cladding system that simulated a traditional finish, but with a radically different technical solution.

The Challenge

Apollo was engaged in the product development process to specifically look at ways of developing the exterior cladding system of the eHouse.

Our role was to assess the external environment in which the eHouse would operate and to develop the technical requirements of the exterior cladding system in terms of in-service performance, robustness and durability.

The design brief for the external cladding system determined that a minimum 60 year design life was required and that the whole-house solution would require third party accreditation to comply with mortgageability, insurance and builders warranty requirements. The ultimate endorsement of the system would be to achieve British Board of Agrément certification through a rigorous testing regime.

The Result


Apollo developed a radical new adhesive solution for the bonding of a wide range of clay bricks on to a novel cementitious backing board for application within the controlled manufacturing environment and in exposed conditions on site. The Durabrick system achieved full BBA accreditation as part of the eHouse system and Elliott Group progressed to implement a dedicated manufacturing line for the production of this innovative solution.

“Without Apollo’s expertise this would not have been possible.”

**Darren Richards-
Manufacturing Director**



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