

Our involvement in offsite construction



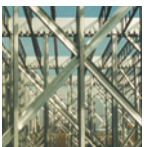
Volumetric Modular

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.



Pod Case Study

The Client

Elements Europe is one of the most innovative and dynamic pod businesses in the UK. Set-up in 2006, the company has taken a radical approach to the design and delivery of both bathroom and kitchen pod technology.

An innovative approach to product development has seen the CoPod and SoloPod product ranges launched with great success.

Elements identified further product innovation opportunities with the development of a structurally integrated pod solution as part of a light steel frame package – in partnership with Light Steel Frame Solutions.

The result is a product range known as SoloPod ST – an optimised 'hybrid' construction method with a fully integrated pod that provides a load bearing capability.

The Challenge

Apollo was engaged as part of the product development team to analyse the opportunities for value-engineering the SoloPod ST product and to see how adhesive technology might provide a more efficient means of achieving the structural stability that the product required.

Our focus was on using adhesive technology to create composite wall, floor and ceiling elements in order to produce structural enhancement without the need to introduce a significant amount of mechanical bracing or stiffening within the product.

Due to the variety of materials and a challenge of bonding to a primarily galvanised steel sub-frame a number of adhesive formulations were developed and tested.

The Result

Apollo developed a universal solution for the structural bonding of lining materials to the pod sub-structure to enhance the structural performance of the SoloPod ST product.

The performance of this solution permitted the removal of other 'redundant' structural elements from the pod, thereby creating a truly 'lean' but capable solution.

The combination of these advanced engineering solutions not only reduced the complexity of the product, but also reduced the through put time on the shop-floor. Removal of structural bracing also reduced the weight of the pod, which has a direct saving in the foundation load-bearing requirements for the building.

“Apollo transformed our processes.”

**Wayne Morgan -
Managing Director**



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