

# EAST VILLAGE N06, LONDON



PROJECT VALUE - £179M  
CLIENT - GET LIVING  
MAIN CONTRACTOR - MACE  
ARCHITECT - HAWKINS BROWN  
STRUCTURAL ENGINEER - WALSH  
M&E ENGINEER - BOROUGH  
ENGINEERING SERVICES  
PCE SCOPE OF WORKS -  
• INTEGRATED FACADE  
• TWINWALL  
• SOLID WALL  
• STAIRS AND LANDINGS  
• SOLID FLOOR UNITS  
• INSITU CONCRETE TOPPING  
• DETAILED DESIGN AND  
FABRICATION DETAILING  
• LOGISTICS COORDINATION  
AND MANAGEMENT  
PCE CONTRACT VALUE - £7.7M  
DESIGN - INTERNAL



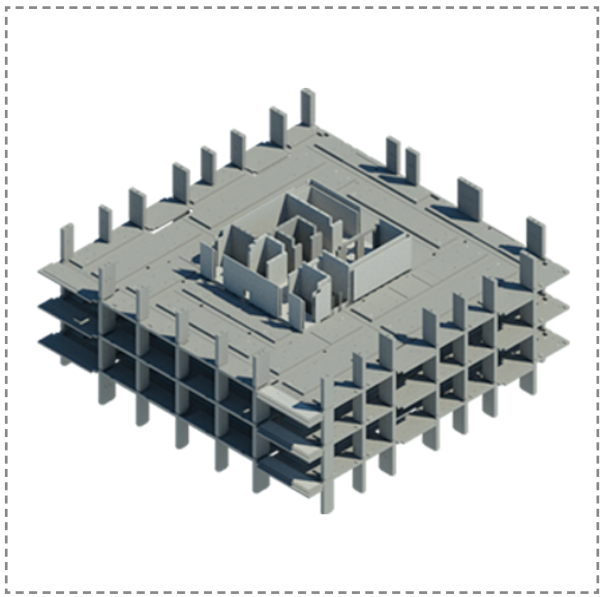
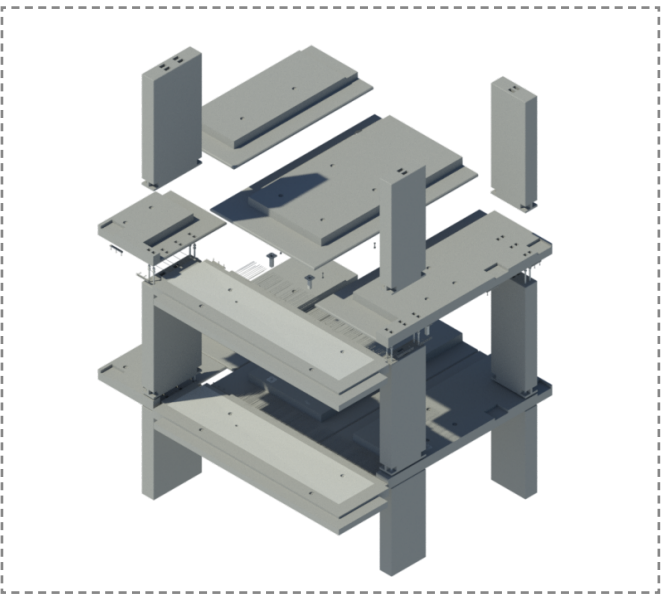
## Introduction

A revolutionary system of offsite construction was delivered by a team consisting of PCE Ltd, Mace Group, and Oranmore Precast Ltd to provide 524 residential apartments in Stratford, East London. The project, known as East Village N06, was part of the regeneration of the former 2012 London Olympics site. The £179 million scheme had been developed for client Get Living, with Architects Hawkins Brown and Structural Engineer Walsh. The team, working in collaboration, developed an innovative off-site engineered Hybrid construction approach known as HRS (High Rise System), which delivers speed of construction, offsite-engineered quality, and on-site safety. The system was used to deliver the superstructure, façade, bathrooms, and primary M&E services for the two towers at East Village N06, which are 26 and 30 storeys tall.



## High-Rise Expertise

PCE’s role in the collaboration was to provide pre-construction expertise, detail design, planning, off-site and on-site assembly. This was delivered expertly by its directly employed multi-skilled construction teams, using its proven HybriDfMA processes. PCE has established extensive experience and a first-class track record for delivering offsite engineered structures for high-rise buildings using its ‘kit of parts’ philosophy. The HybriDfMA approach facilitates a broader prefabrication strategy, with façade sections being preassembled and fixed offsite onto the external precast concrete floor units. This allows the envelope to be constructed concurrently with the superstructure, without the need for scaffolding or site operatives working at height externally to the structure. In addition, N06 saw prefabricated M&E modules, bathroom pods, and utility cupboards seamlessly integrated into the erection of the two towers, as they progressed.



## Project Features

The construction process followed a modular approach for each level, utilising an optimised and repeatable ‘kit of parts.’ This kit comprised 46 reinforced precast concrete units, including columns, twin walls, solid walls, stairs, landings, and custom reinforced concrete HRS floor units, with 24 units per floor. A notable feature was the integration of a unitised façade, preinstalled at an offsite preassembly factory and delivered to the site as a floor and façade subassembly. This approach also involved seamlessly integrating the building’s mechanical and electrical (M&E) systems. Each level’s construction produced a 625m² residential floor plate, incorporating premanufactured bathroom and service utility cupboard units, preassembled vertical riser modules, and preassembled horizontal M&E distribution modules. These were installed within the precast lobby units before on-site assembly, significantly reducing on-site activity and risk. Use of PCE’s systematic HybriDfMA solution allowed PCE’s highly skilled, multi-disciplined onsite team to install with speed, safety, and accuracy. Through a model of repeatability, standardised methodologies, and offsite engineering, a streamlined team of just 24 operatives were able to install each level within a 5-day cycle, completing structural installation of 524 modern apartments across two high-rise towers in just 12 months. This approach elevates efficiency and predictability, ensuring industry-leading quality, speed, and reliability, whilst adhering to the highest standards of safety. Efficient logistical management of both offsite and onsite processes was critical to the project’s success.



## Key Metrics

- 26 and 30 storey Hybrid Frame tower structure
- 12 month construction programme
- 200,000 site man hours
- 625m² residential floor plate constructed every 5 days
- 524 new residential apartments
- No requirement for any external scaffolding
- Significant reduction in waste
- High-level offsite quality control
- Assembled by just 24 PCE multi-skilled site operatives per tower
- Deliveries to a busy restricted site



Every aspect of the sequence and build combination had to be taken back to basics and thoroughly examined to eliminate waste wherever possible. The benefit of using an offsite engineered HybriDfMA system, is that it allows innovation and improvements to be tackled at an elemental level, thus allowing

small changes to be made which aggregate to have a significant impact on the overall process. Simple changes such as preloading the flooring components with loose reinforcement positioned exactly where steel fixers need it, prefabricated shutters, reinforcement cages and pre-fixing edge protection prior to being lifted into place all contribute to improving site efficiency.

## Project Delivery

PCE’s multi-skilled team installed a total of 57 floors across the two towers, embodying a commitment to faster, safer, and more efficient construction. The company’s DfMA system pushes the boundaries of existing construction methods, leveraging offsite technologies for optimal efficiency. This dedication to rapid, high-quality construction is reflected in an impressive 5-day cycle to complete each floor, inclusive of bathroom pods, utility cupboards, and M&E integrations. On-site hours were significantly reduced, with just 24 operatives per tower effectively utilising three tower cranes. The integrated façade system, M&E modules, bathrooms, and utility cupboards, coupled with the proactivity of PCE’s multi-skilled site team stripping back-propping and completing finishing works, ensured the fitting out of the towers could progress rapidly, efficiently and effectively. The concurrent construction benefits of PCE’s systemised approached ensured fit-out works progressed well; follow on trades completed weather dependant finishes just three levels below the construction leading edge. To complete the final roof level, 13 tonnes of steel reinforcement mats were rolled out, with 90m³ of insitu concrete poured over the top. Through utilising predesigned roll-out mats manufactured offsite by Hy-Ten, onsite labour and steel fixing time was reduced by 90%. This approach to onsite efficiency, quality, and safety through preplanning and offsite fabrication sits at the heart of PCE’s ambition to lead the industry in delivering hi-rise residential projects, using Modern Methods of Construction and offsite technology.

