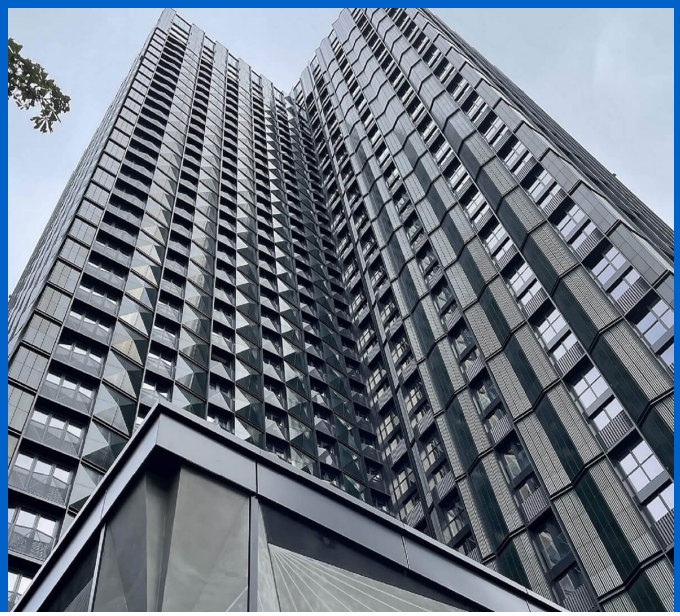
References

George Street



Uponor involvement

- 120,000m of Uponor multi-layer composite (MLC) pipe | 2,250 MLC manifolds for domestic water systems.
- Uponor started working with the contractor three years ago as the company required a more reliable and stable solution. During the three-year partnership, the contractor has had zero leakages when using Uponor products.

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  Full support was provided throughout the project including bespoke training in different languages for the production employees, advice on what to look out for on the production line in terms of tool maintenance and checks on the pipework once in situ.
- Consultation on the system design, assistance with inventory planning, installation and safety training and site-support

The tallest modular building in the world

Uponor products set the standard for off-site construction projects by providing a quick to install, cost-effective and high performance plumbing system for the safe delivery of domestic water services for the world's tallest modular apartment building.
Uponor has supplied multi-layer composite (MLC) piping as part of the construction of individual apartment modules at 100a George Street, known as Ten Degrees, which is currently the largest modular apartment building in the world.
Located opposite East Croydon Station, the build-to-rent development consists of two towers of 38 and 44 storeys, is 135m high with a total of 546 apartments providing a range of accommodation from studios to 1, 2 and 3 bedroom homes.
Beginning with the specification of the Uponor multi-layer pipe system on this ground breaking project, Uponor and the manufacturer of modular apartments have developed a three year trusted relationship during which time the Uponor Multilayer plumbing system has provided a 100% reliable track record.
In addition to guaranteed performance, quality control is another key reason why Uponor products were used for the project. During manufacture, Uponor's products are date stamped and numbered to ensure that, if required, even small items within a system may be tracked back to the point of manufacture and even down to specific material details. This traceability is an important factor on large scale projects such as 100a George Street.

Project Facts:

Location	Completion
Croydon, Surrey, United Kingdom	2020
Building Type	Product systems
Multifamily homes	Multilayer Pipe Systems
Project Type	
New building	

Partners

Client:
Greystar/Henderson Park Joint
Venture
Architect:
HTA Design
Developer:
Tide Construction

Specification and installation

The modular manufacturer sent its design proposal to Uponor for review as it required a leak-free plumbing solution for its off-site construction projects. Working with their design engineers, Uponor advised on what products were available, which ones would suit the project, where cost savings could be made and then re-worked the design to offer a higher standard product solution.

As a result, a total of 120,000m of MLC pipes were supplied for the project. The MLC pipes consist of an aluminium core, which is layered inside and out with high temperature resistant polyethylene to provide a smooth internal surface which reduces friction losses and helps to maintain pressure guaranteeing a good flow of water to each outlet. The pipe also provides excellent flexibility for a faster install time, while the press fit system cleanly forms a robust connection with no need for hot works whilst also providing a feature to allow a review of the connection following the installation.

Completed in just 24 weeks at a factory in Bedford, George Street is testament to the benefits of off-site construction such as increased quality, reduced project delivery times, reduced waste, fewer on-site trades, greater control over costs and also demonstrates that MMC (Modern Methods of Construction) can deliver more sustainable buildings, whilst perfectly meeting the design and with assured quality for the project.

A total of 1,500 modules were constructed off-site at the Bedford facility where kitchens, bedrooms, living rooms and bathrooms were completely assembled and finished including wiring and plumbing before being transported to site and craned into position where each module has the final service connections made to join the assembly on to the building's central services network.

Uponor worked closely with the modular manufacturer and its employees to ensure the pipework and manifolds were installed to a high quality. Uponor's team were on hand throughout the project to offer advice and assist with regular reviews of installed products and the calibrated press tooling being used.

As the contractor's employees were unfamiliar with the installation of the Uponor MLC pipe system, Uponor provided on-site installation and safety training which was translated by the contractor's team in to several languages so that every engineer was trained to the same standard all on the same day. Once completed, to ensure that each installation was assembled correctly and up to the expected high standard, each module was pressure tested using air.

Key points

- Uponor supplied over 120,000m of MLC pipework and 2,250 manifolds, used to supply the hot and cold water to each apartment.
- Uponor helped to ensure that each of the 546 apartments was of the highest quality by providing bespoke on-site installation training to each of the engineers.
- Being involved early in the design stage, Uponor was able to advise on the most suitable products, and where savings could be made on previous designs without compromising quality or performance.
- The success of Uponor's products within the design specification means that it can now be replicated across all of the contractor's similar projects.