

A MOST ACCEPTABLE FACE

By Stephen Mold, Chairman of the Architectural Cladding Association (ACA)



Over the past decade or so, internet technology and wireless communications have significantly changed the way that the precast concrete industry does business, not only by improving the efficiencies of the production, transportation and delivery processes but also by improving the traceability of a particular precast unit. At the same time, the sustainability benefits include a reduction of waste and a traceability that encourages potential reuse of precast units.

It has long been known that most of the cost of a building arises during its working life, with construction only a small proportion of the total. In design, the question of what is best for the life of the building should therefore be considered before what is best during the construction phase. Today, precast is becoming the sustainable choice for refurbishment. Whether it is for re-cladding an existing structure or replacing a facade, the benefits of this form of construction are proving themselves not just in the construction process but also during the life of the building.

The Architectural Cladding Association and British Precast have recognised this and members' compliance with environmental and quality management systems, responsible sourcing standards, BSI kite mark standards, ACHILLES and OHSAS 18001 is mandatory.

Sustainable design can increase the building's performance during its life and eliminate unnecessary waste during construction. Uniquely, concrete is 100% recyclable: it may be crushed for aggregate or the panels re-used in a new building. Obviously a major benefit of architectural concrete is its inherent fire resistance, robustness, durability and long-term performance.

MediaCityUK in Manchester aspires to the highest environmental and energy-saving ratings. In fact, it is the first development in the world to become a BREEAM-approved sustainable community. Techrete (UK) Ltd became involved with the scheme to clad several of the blocks. The scheme required high-quality architectural cladding that could be installed under a fast-track programme including the installation of windows off site in the precast factory and without scaffolding to give good value for money. Concrete was chosen for its high-quality finish, speed of fabrication and erection, and cost in comparison to masonry.



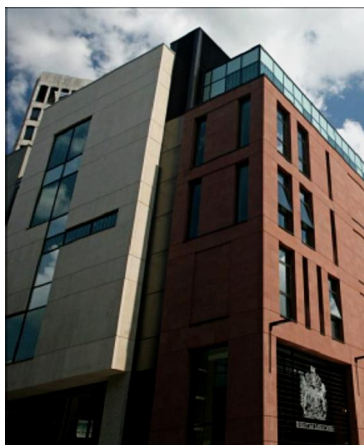
As each cladding panel was cast, it was inspected, stored and made available for delivery on a just-in-time basis for off-loading and hoisting to its final position, ensuring quality with efficient performance and zero defects.

In Manchester, Argent's newest and most prominent mixed-use development, Piccadilly Place, has seen Trent Concrete Ltd and Techrete in action, each constructing separate buildings on the site. Apart from their extensive aesthetic quality, they were designed to achieve the BREEAM "Excellent" standard. Set to be the number one venue in Manchester once operational, the development offers five spectacular buildings incorporating residential and office space, car parking and a modern square. On the fourth building, Trent Concrete designed, manufactured and installed precast structural columns, cladding and brise soleil. The seven storeys of modern design more than hold their own among the contemporary projects. And Trent's 11 structural columns add both strength and superior looks.

In Canterbury, Augustine House, designed and constructed by Decomo UK Ltd, is the largest project to have been commissioned by Canterbury Christ Church University since its first campus was constructed in 1963. The four-storey development provides a gross internal floor area of over 12,000m² and its impressive library will house around 300,000 books. Involved at the pre-contract concept stage, Decomo designed, manufactured and installed the architectural precast concrete cladding that was used extensively both to the external facades and the internal walls of the stunning 120m-long glazed atrium. In all, there were 270 individual panels covering some 1500m².



In addition to the 'reconstructed stone' cladding, Decomo's contribution included 30 special knapped flint-faced panels around the main entrance to the building: to achieve this, 5600 individual flints had to be handworked using traditional methods. The building was used as the pilot scheme for the new BREEAM Higher Education assessment category and received a rating of 'Very Good'.



Bristol Civil Justice Centre was designed to provide modern court facilities and administrative offices to meet the anticipated workload for at least the next 25 years. Produced off-site in a controlled factory environment, the precast cladding panels were typically delivered on a just-in-time basis for offloading and hoisting directly to their final fixing positions, so minimising any need for double handling or temporary storage. The Marble Mosaic Co Ltd carried out the detail design, manufacture, delivery and installation of the precast cladding panels. Produced in accordance with the recommendations of BS8297:2000, panels were faced with three types of natural stone: Red Eichenbeuhl sandstone, Pennant stone and Jura limestone.