



Courts favour precast cladding

The Bristol Civil Justice Centre has been designed by Birmingham-based Associated Architects LLP with Ramboll Whitbybird to provide modern court facilities with administrative offices to meet the anticipated workload of Her Majesty's Courts Service in the Bristol area for at least the next 25 years. Now nearing its practical completion

by Miller Construction Ltd, it will also significantly contribute to the regeneration of the city's Redcliff area.

Given the site's city centre location and particularly restricted access constraints, innovative solutions were required to ensure that the construction of this high-specification six-storey building was efficiently achieved with

the minimum of disruption to site neighbours. These solutions included the use of precast concrete panels for its external cladding.

Produced off-site in a controlled factory environment, the precast cladding panels were typically delivered on a just-in-time basis to suit site progress for off-loading and hoisting directly to their final fixing positions, so minimising any need for double-handling or temporary storage.

The panels are typically storey-height or grid-width units spanning between the floor slabs or structural columns and their sizes were optimised to suit the lifting capacity of the site tower crane. This use of large panels weighing up to 10 tonnes correspondingly reduced the number of units to be fixed and

continued on page 2



continued from page 1

consequently cut their installation period. It also eliminated the need for an external scaffold – an especially valuable advantage given the closeness of the adjacent tower block and the further requirement to ensure that the access road to its car park remained open.

Formally appointed by Miller Construction in November 2008, The Marble Mosaic Co Ltd has been responsible for the detail design, manufacture, delivery and installation of the precast cladding panels under a £2.2 million work package. Produced in accordance with the recommendations of BS8297:2000, the precast concrete panels were faced with three types of natural stone. Red Eichenbeuhl sandstone supplied by Zeidler & Wimmel was selected to complement the brickwork of the nearby office buildings. Pennant stone from Forest of Dean Stone Firms Ltd and Jura limestone supplied by Solnhofen Stone Group were also chosen to match the colours of the stonework of the adjacent ancient parish church St Thomas.

In an unrelated contract, The Marble Mosaic Co Ltd recently provided stone-faced precast concrete cladding panels for the St David's Centre development in Cardiff and the new mixed commercial and retail buildings at 200 Piccadilly, 10 Lime Street, and 40 Gracechurch Street in London.



Stephen Mold

The Architectural Cladding Association has announced the appointment of Stephen Mold as chairman. Stephen started in the industry in 1979 as a management trainee at Bovis Construction and, in his own words, “spent five interesting years

doing everything from making the tea to laying blocks on site to attending high-level client meetings with the directors of Bovis, at the same time studying on block release for the CIOB examinations”. Five years later he was a senior surveyor for Bovis, running large commercial projects.

In 1990 he joined PMI International, then the country's largest independent project management company, where he developed financial modelling techniques and programs to monitor not only construction expenditure, but also income from rentals and sales to assist clients make better-informed decisions through the design and construction phases of a commercial city development.

Two years later he moved to CGC International, a multi-disciplinary consultancy with architects, project managers, engineers and commercial management to further develop financial modelling systems that again took into account both income and expenditure streams, this time for residential development in Europe. These involved large projects such as Pont Royal

near Aix-en-Provence where good modelling allowed a more informed and considered development.

In 1992, having worked for both main contractors and clients, Stephen decided to join a small specialist masonry contractor where he initially ran the commercial side and later became its managing director. Over the next five years, he was responsible for its rapid expansion into a successful design, manufacture and installation company.

Currently, Stephen is sales director of architectural precaster Techrete, a company he joined five years ago. Commenting on his appointment, he said “With my extensive knowledge of the construction industry from client side to specialist contractor, my extensive contact list throughout the field and experience of building up smaller companies, I feel I have the ability to take the Architectural Cladding Association forward over the coming year”.

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MediaCityUK, Manchester

In 2007, the BBC confirmed it would be moving five of its departments to a new development on Pier 9, to be called MediaCityUK. The affected departments are BBC Children's, BBC Children's Learning, BBC Sport, BBC Radio Five Live, and parts of BBC Future Media and Technology (including a small number from BBC R&D), involving about 2,300 staff. It was also confirmed that BBC North West would relocate to the site from its premises in Oxford Road, Manchester. The move, expected to be completed by 2011, marks a major decentralisation of the corporation's operations, and will represent the BBC's largest presence outside London. The arrival of the BBC is expected to attract other media, broadcasting, and film-making companies to the area.

Unlike most cities, MediaCityUK is not constrained by existing architecture or infrastructure, meaning a bespoke city is being produced to suit the needs of the media industry. Phase I has created space for offices, media studios, retail outlets, residential, commercial, hotel and leisure, together with a public piazza with space for 4000 people and a technical infrastructure supported by 18million metres of fibre optics.

All the buildings within MediaCityUK aspire to the highest environmental and energy-saving ratings. In fact, they are the first development in the world to become a BREEAM-approved sustainable community.

Techrete became involved with the scheme to clad several of the blocks on the scheme, the BBC buildings (Blocks A,B and C) and the 24-storey Residential Tower. The scheme

required high-quality architectural cladding that could be installed to meet the demands of a fast-track programme, without scaffolding and to give good value for money – requirements that led the design team to investigate precast concrete for the façade. Techrete of course had to tender for the work along with everyone else to ensure that a specialist subcontractor was chosen who was not only capable of carrying out the required work but who would do this at market competitive rates.

Once appointed, Techrete worked closely with the main contractor and the professional design teams to develop the exact colour and shade of each architectural precast element. Three main colours were used: dark grey with a heavy acid etch to give gravitas; white with a honed finish to distinguish the residential block; and a honed grey precast specially developed for the project to mimic the reflective nature



of the glass. The dark grey with the honed grey inserts was used on blocks A and B and block C was all dark grey with white for the residential block.

The lower level blocks A and B had required part of the precast cladding to look from a distance as though it were part window. For this, Techrete proposed honed precast concrete as the solution so that a reflective finish would reduce the divide between masonry and glass.

The honed grey within the panels on blocks A and B required two-stage casting, the grey part being cast first and then de-moulded and polished before being incorporated into the larger dark grey panel. This called for a high degree of precision and the quality was ensured via the company's comprehensive ISO 9001 accreditation management system.

The project uses single-skin precast panels that are generally individually supported from the primary structure adjacent to column or wind post positions. This was co-ordinated early in the design programme which highlights another advantage of early involvement of the main interfacing trades. The panels are insulated with a rigid board which has a vapour barrier incorporated in the rear face of the material. This was co-ordinated with the fire and acoustic barriers at floor levels which were specially designed and installed by Techrete to meet the high specification for acoustic and fire control.



Tower block units were fitted with the windows at the Brigg factory before being transported to site, which gave huge benefits in time, cost and traffic to site.

Concrete was chosen for its high-quality finish, speed of fabrication and erection, and cost in comparison to masonry while giving a high-class image and a scaffold-free method of erection. As each precast 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 fixing position, ensuring quality with efficient performance. This method of construction also eliminates the need for wasteful double-handling of materials and temporary storage on site. Typically a team of four or five erectors can install six to eight large panels a day without the need for an external scaffold.



Not Chaucer, but a Canterbury Tale nevertheless!

Designed by the Architects Design Partnership, Augustine House in Rhodas Town, Canterbury is the largest project to have been commissioned by Canterbury Christ Church University since its first campus was constructed in 1963. The new library and central learning resource centre is now the university's premiere landmark and gives students state-of-the-art IT facilities, creative learning spaces and a whole range of student support services along with cafes and drop-in internet access. The four-storey development provides a gross internal floor area of over 12,000m² and its impressive library will house around 300,000 books.

Following much involvement with ADP during the pre-contract concept design, Decomo UK Ltd was appointed by main contractor Wates Construction Ltd to design, manufacture and install the architectural precast concrete cladding that was used extensively both to the external facades and the internal walls to the stunning 120m-long glazed atrium. In total, there were 270 individual panels covering some 1500m². A white concrete with an acid-etched finish was selected for the cladding. Insulation was either pre-fixed to the cladding panels by Decomo in its factory or, in the case of panels being installed to shear walls, fixed on site to the walls by Decomo's installation team.

Cladding installation had to overcome a number of logistical challenges. For example, where the two rectilinear blocks, each side of the central atrium, are linked by a series of bridges and platforms, the cladding had to be positioned in partially underslung conditions and sequentially with interfacing works. Specialist lifting equipment had to be used along with a 'Spider' roof crane. Generally, however, installation was done using the site tower cranes augmented where necessary by mobile craneage. Throughout the project, the close coordination and cooperation between Decomo, Wates and other subcontractors ensured continuity of

work and adherence to programme on this tight brownfield site.

In addition to the 'reconstructed stone' cladding, Decomo's contribution included some 30 special knapped flint-faced panels around the main entrance to the building. Knapped flint can be seen throughout Canterbury on many historic and modern buildings alike. The city walls, parts of which date back to 1551, are almost entirely built from flint stones. Indeed, the structural glazing to the front façade, adjacent to the main entrance, will during the day reflect the city walls opposite the building, thus creating a becoming setting for the Decomo knapped flint panels.

ADP required that the flints should be a consistent 60mm × 60mm square-faced module as opposed to being the customary random sizes and that they should be placed in a regular pattern. This meant that each of the 5600 individual flints had to be hand-worked using traditional methods. These were subsequently hand-set by Decomo into the white, acid-etched architectural concrete cladding panels framing the flints. The 'frames' were cast and finished first and the flints then placed face up in a mould and the unseen 'backing' concrete into which the flints were actually set was placed as a second-stage pour.

The building was used as the pilot scheme for the new BREEAM Higher Education assessment category and received a rating of 'Very Good'. The principals involved have received a LABC south east region award in the best educational development category.



It represents the final phase of the mixed-use development, which was named "Commercial Development of the Year" in *Property Week's* 2008 North West Property Awards. As well as its extensive aesthetic quality, it has also been designed to achieve the BREEAM "Excellent" standard.

To complement the prestigious development and the building's design, it was important to provide Four Piccadilly Place with its own modern character. This called for bold features such as a number of extensive concrete columns that bring life to the aesthetic. At 8.5m high and 900mm by 350mm thick, the dark grey reconstructed stone columns are substantial: indeed, each had to be cast in two sections. However, to have created them from an alternative material and to such a high quality would have been almost impracticable and would have added substantially to the budget. Also included in the work is over 2600m² of honed white reconstructed stone cladding to create a striking all-over aesthetic. Keeping the sun off the workers are a series of precast brise soleil in a gleaming white reconstructed stone finish – arguably the icing on the cake.

Piccadilly is the Place for Trent

Manchester's newest and most prominent mixed-use development, Piccadilly Place, has seen precast specialist Trent Concrete in action as part of a £1.15 million contract. Set to be the number one place to be in Manchester once operational, the 657,000ft² development offers five spectacular buildings incorporating residential and office space, car parking and a modern square.

For the fourth building, which comprises 125,000ft² of premium office space, the company designed, manufactured and installed precast structural columns, cladding and brise soleil. The seven storeys of modern design from architect Hodder Associates more than hold their own among the contemporary projects. And Trent's 11 structural columns add both strength and superior looks.

With green targets increasingly demanding better standards in construction, the use of precast concrete solution was a good environmental choice. Cast off-site in quality-controlled conditions and requiring a minimum of equipment to install, the components minimise emissions, leaving the developer confident that the work will have negligible impact upon the environment.

Quote from David Walker managing director, Trent Concrete: "We are proud to have played a vital role in this high-status project that has already received such acclaim. It was a rewarding challenge to provide it with such substantial features that are a major part of its striking appearance"

Project:	Four Piccadilly Place, Manchester
Client:	Argent Group
Architect:	Hodder Associates Ltd
Contractor:	Carillion Building

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