



2015
SHORTLIST

The David Hockney Building, Bradford College

Bradford College's vision was to create a landmark building that encourages innovative forms of learning. To deliver this brief and provide future flexibility, the architect crafted a series of dynamic interlocking open floor plates within a simple post-tensioned, cast-in-situ concrete frame, beautifully exposed throughout.

Adding to the regeneration of the wider area, The David Hockney Building, Bradford College's new campus, was ready to welcome learners in September 2014, providing an innovative and technology-rich learning environment in the heart of the city.

The new campus, named after famous alumnus and internationally acclaimed artist David Hockney, has transformed students' experience using new styles of learning, which embrace cutting-edge technologies. Realistic work environments are open to the public, with opportunities to showcase learning activity through the open-plan areas.

In 2008, the college embarked upon a comprehensive redevelopment strategy funded by the Learning and Skills Council. A year later the LSC withdrew the funds and the college was forced to reconsider its strategy with a majority self-funded project within a volatile and challenging marketplace. With assistance from Bond Bryan Architects, the college devised a reduced-scale development that, at its core, retained the original aims of embracing educational transformation within a truly flexible environment, while realising efficiency and flexibility in space usage to accommodate changing methods of learning.

The scheme is approximately 24,000m² with a gross out-turn cost of £50 million. At the outset of construction works, the team was actually challenged to save £2m of value engineering.

The scheme

Externally, the scheme draws upon the historic precedents set by the mill buildings situated within Bradford, while seeking to create an economic solution with locally sourced (Brighouse) natural sandstone. It pays homage to the textile industry of Bradford by replicating the concept of a fabric weave within the coloured segments of the elevations, created using an innovative Kingspan system that allowed for quicker achievement of watertightness and was also less labour-intensive.

Internally, the scheme was envisaged as a single-entity collaborative space, surrounded by specialist teaching zones – requiring a move away from traditional teacher-led styles of delivery in smaller cellular classrooms – and

into larger more flexible spaces that offer a range of potential learning environments.

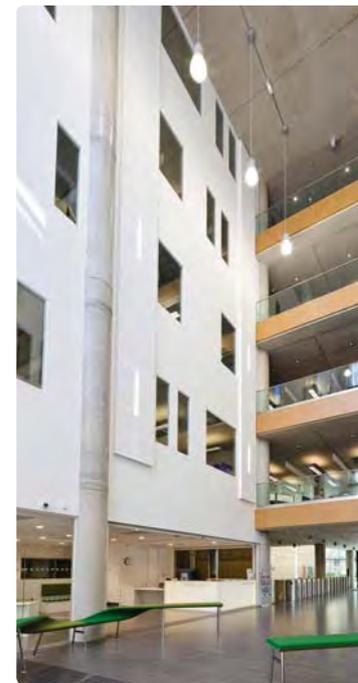
Concrete was used extensively for the main primary structure, cores and as a key interior-design aesthetic. This maximised the use of the building's thermal mass to assist in stabilising daytime temperature swings and limiting the need for additional specific cooling.



Meeting Place Café space.

In response to the brief and the cost constraints on the scheme, a simple relatively deep plan building form was created that makes maximum use of the available area on the site, in order to limit the overall height and create large and efficient floor plates. Using an extremely repetitious and rational concrete grid (8375mm) throughout the scheme allowed for flexibility with the void edges and the creation of a visually dynamic space.

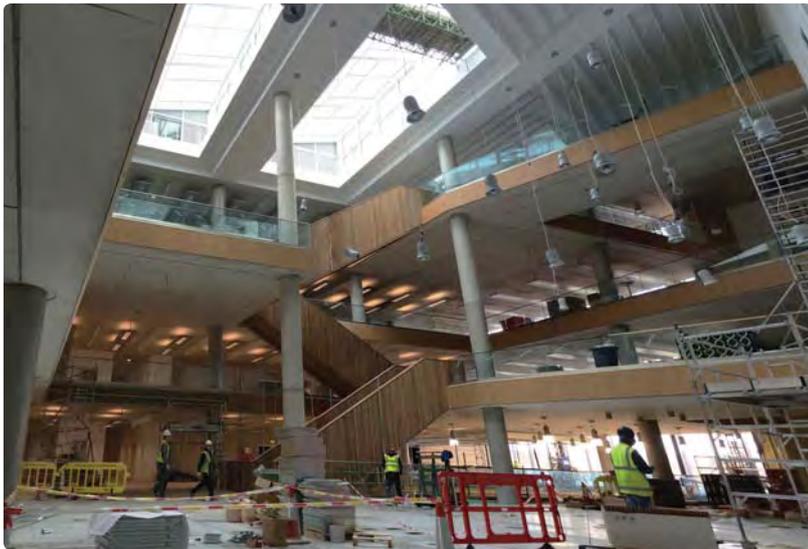
A series of lightwells and voids are cut into this simple form, not only enabling daylight to penetrate the deep floor plates but also to add, crucially, visual drama and interest into the building. These voids allow views through the structure, visually linking the learning activity on different floors and creating a range of spaces – from contained single-storey spaces for smaller-scale and cellular activities, through to double- and even triple-height spaces.



Above: Main entrance atrium.

Top left: Saw-tooth glazed façade creates clear views over Bradford.

(Photos: Phil Grayson PCDdesigns.co.uk)



Main LRC space during construction.

The majority of the concrete throughout the scheme is exposed special class (BS 8110 6.2 7.2) with a Keim Concretal Lasur paint finish to homogenise the colour of the various elements of the exposed frame. This decision was made early on as both an aesthetic choice and also a cost saving against a suspended ceiling system. Retaining a high-quality finish on the soffits and negating the need for any surface-mounted conduit required a co-ordinated approach to the servicing strategy from all team members. The overall strategy was to run all conduits and ductwork within a 600mm raised-access floor and drop through the slabs. This needed every penetration to be designed and co-ordinated prior to casting the slabs, to reduce unnecessary time on-site.

Feature soffit recess details and site co-ordination.



Design elements

Internally, concrete was used as a feature design element within the main ground-floor café gathering space.

The concrete transitions from a vertical timber cladding system into a fan-like pattern, which unravels and affects the soffit recess lines and eventually becomes a feature graphic print. This approach to integrating the concrete within the interior-design strategy can be seen throughout the scheme.

Inherent sustainability was a key component of the design and the supply chain was involved from an early stage. Lean-construction workshops helped create efficiencies but also fostered an environment of collaboration.

The traditional concrete frame was redesigned as a post-tensioned solution, saving a third off the concrete and reducing the amount of deliveries to site. All timber used was from registered sustainable sources. Materials were reused where possible, including the plywood hoardings that enclosed the site; these were used for shuttering the retaining walls in the external works scheme.

Overall, the project has achieved the key objectives set out by the original brief – BREEAM rating of ‘Very Good’ and reduced cost in use. While the curriculum is not as originally imagined, the building’s inherent flexibility has easily adapted to the changing needs of the college.

The project was not only used as an exemplar for innovation in education space but also as a pathfinder project for building information modelling for the entire team.

The David Hockney Building is the second phase of Bradford College’s Accommodation Strategy. The first phase involved the development of Trinity Green Campus in 2008, a modern building that houses the engineering, construction and sport curriculum areas. A further phase of development, the Bradford College Advanced Technology Centre, has now been completed.

The design team, client and BAM adopted a proactive team approach throughout the project that resulted in very few issues during construction. The fact that a further project, the Advanced Technology Centre, was awarded to the same design and delivery team is testament to the client’s satisfaction with the build process.

The college has been in occupation of the building since September 2014 and has reported benefits of reduced staffing costs, improved team working and student supervision, as well as improved student achievement levels.

Above all, the new building is one of which the college and the people of Bradford can be proud. The opportunities provided by the building and the flexibility in teaching and learning methods will enable the college to be at the forefront of further and higher education delivery in future years. ●

The David Hockney Building, Bradford College

Owner	Bradford College
Architect	Bond Bryan Architects
Structural engineer	Jacobs (SKM)
Services engineer	Couch Perry Wilkes
Main contractor	BAM Construction
Groundwork and formwork	GRKC
Concrete supplier	Hanson Concrete
Post-tensioning	CCL

View from Great Horton Road.



Photo: Phil Grayson PGDesigns.co.uk

Judges’ Comments

Concrete was the right choice for the design and for the nature of the building. It is a good building with a fresh open feel. The use of concrete is well planned and executed with some good features. The choice of concrete allowed the design to be flexible, and use of post-tensioning allowed cost and time saving.

There is plenty of exposed concrete – the finish on soffits is good, overall colour consistency good and details and tops of columns are well executed. The feature walls in particular have a very good finish.

Columns are a big exposed feature, both through the partition walls and from floor to ceiling across four/five storeys.