

## KEY FACTS

Project name: Corby Civic Hub

Location: Northamptonshire

Classification: New Build

Type: Mixed Use Civic hub and Arts Centre

Size: 7,700 m2 NIA

Total Capital Cost: £35m

Client: Corby Borough Council



Funding: Corby Borough Council, HCA (formerly English Partnerships), North Northants Development Company (formerly Catalyst Corby), Northamptonshire County Council and East Midlands Development Agency, Department of Communities & Local Government (formerly ODPM).

## Project team details:

Architect: Hawkins\Brown

Consultants: Structural Engineer: Adams Kara Taylor

Services Engineer: Max Fordham

Cost Consultant: Gardiner & Theobald

Theatre Consultant: Charcoalblue

Landscape Architects: Grant Associates

Acoustics Engineer: RBA Acoustics

Project Manager: Mouchel

CDM Coordinator: PFB Construction Management Services

Sustainability Consultant: Southfacing

Graphics & Signage: SEA

Contractor: Galliford Try Construction (Central)

Third party certification achieved: BREAM Excellent (the only theatre venue in the UK to receive an "Excellent" BREEAM rating)

## PROJECT SUMMARY

Hawkins\Brown's striking Corby Cube is the focal point of a major regeneration programme to revitalise the former steel making town in Northants, UK. Won in international competition in 2004, the Corby Cube combines a diverse programme of civic and arts uses into a new model for civic architecture.

Maximising its central location at the heart of a new town square, the building's array of uses are arranged around an internal 'promenade architecturale' composed into a coherent glazed cube form with four 'live' elevations, each articulating the uses contained within. Civic functions such as the town hall and library are organised on a ramp and wrapped round the theatre spaces. The intelligent façade also contributes to the highly sustainable credentials of the building, illustrated by the gaining of the first BREEAM Excellent score for a theatre.

## CAMPAIGN FOR A SUSTAINABLE BUILT ENVIRONMENT

The building illustrates a new paradigm for civic architecture enabling access for all, promoting leading edge design, achieving environmental excellence and bringing together wider arts and civic activities into one inclusive community building.

Commissioned by Corby Borough Council, the Corby Cube is part of a wider sustainable regeneration strategy driven by North Northants Development Company to revitalise Corby as a vibrant, confident and attractive town to live, work, visit, shop and do business.

## ENVIRONMENTAL IMPACTS

### Building orientation/site issues:

The brownfield site originally housed an existing civic centre, which was demolished when it came to the end of its structural life in the 1990s.

Although appearances would suggest that the building is fully glazed this is not the case. The patterning on the glass has been developed to allow each façade to react fully to the functions within and their orientation. For example the lower levels of the theatre space are buried into the ground and where the upper levels meet the façade coloured, opaque, fully insulated panels are used on the façade as the space needs no daylight. For functions such as the library and civic offices the glazing is expansive and clear, letting in calm north light. For functions on the south of the building a percentage and specification of glazing has been used which allows daylighting, but not overheating.

The building is naturally ventilated through actuator controlled opening panels in the cladding and this is supported by the exposed concrete soffits that provide thermal mass and regulate the internal temperatures.

### Transport:

The architectural design competition was launched as part of a sustainable masterplan developed for the council. This was strengthened by the design concept for the building, which consolidated the brief for two buildings into one larger one, reinforcing the masterplan and creating a dual use building that benefits from shared infrastructure and servicing. The civic centre also provides the setting for a new community swimming pool, that makes use of all the transport links described.

The whole town centre has now been reorganised to give this civic building meaning in its context. Bus routes and stops have been repositioned to enable easy access. The Corby Walk is a new pedestrian route that links the building with the main central High Street. The scheme makes use of a car sharing scheme in the adjacent car parking facility and taxi ranks have also been more conveniently sited for the building entrance. Cycle parking and showers are available and shared with the adjacent swimming pool.

### Energy Efficiency:

As described the building exploits orientation as a passive design tool and the plan and envelope is arranged appropriately. The building uses this to ensure all permanently occupied spaces are well daylit, reducing electricity use, and naturally ventilated using the stack effect to draw air through the building. Exposed concrete soffits allow regulation of the internal temperatures.

## CAMPAIGN FOR A SUSTAINABLE BUILT ENVIRONMENT

The theatre spaces can not be daylight or naturally ventilated, but are therefore buried in the ground so that uses which do need daylighting benefit. The mechanical ventilation system operates with heat recovery. The huge concrete structure also acts as a heat sink for the rest of the building.

Other environmental measures to reduce energy consumption include a solar thermal heating system and low energy lighting with a zoned lighting control system.



The building was fully commissioned and has also gone through a seasonal commissioning programme to ensure systems are performing at their optimum level and user comfort is maintained. Sub metering of all uses for energy monitoring has also helped the Council manage the building.

All of the above means that the building is designed to perform beyond the statutory levels.

## **Water Efficiency:**

A 15m<sup>3</sup> tank utilises 99% of the water run off from the building to provide rainwater recycling for the flushing of WCs or irrigation. This is sized so that there will always be water available for the maximum likely use.

In combination with this low water usage sanitaryware is specified, water metering and leak detection is in place together with sanitaryware shut off systems providing water to wcs and urinals.

## **Materials:**

Hawkins\Brown operate a responsible materials specification procedure in-house and this project followed the protocol. Wastage was reduced in specified a unitised cladding system that was factory produced and fixed into place on site. All timber, both for use in the building and on site, was FSC certified.

Where possible self finishing materials were used, such as exposed concrete soffits and natural timbers. This avoids using additional material. All flooring specified contained recycled content and paints were low VOC.

## **Indoor environmental quality:**

Habitable spaces are arranged around the building perimeter. These benefit from a good lux level of daylighting and uniformity. Space planning was done early in the design process to make sure all users benefitted from this and are not far from windows.

The envelope integrates actuator controlled, acoustically attenuated opening panels to allow fresh air into the building. Glazed roof top 'chimneys' create a stack effect drawing air through the external envelope and into the main circulation areas, creating air changes, which ensure CO<sub>2</sub> levels are not too high, whilst simultaneously allowing daylight into the heart of the building's plan. The building is organised into thermal zones, ensuring efficiency of the heating systems and controls.

## **CAMPAIGN FOR A SUSTAINABLE BUILT ENVIRONMENT**

The theatre is mechanically ventilated, but ensures that sufficient air changes are made. Other services, such as plant and wcs that do not require daylight are organised in the centre of the plan. Circulation areas that do not have side daylighting benefit from roof lights.

## Operations and maintenance:

User consultation was carried out throughout the design process both with the council funder client and the user client representative for each use. A full commissioning and client liaison programme was set up to ensure the building would be managed appropriately and properly handed over to the client to ensure a 'soft landing'.

All energy consumption and water use is metered, encouraging the occupants to monitor their use.

The building has already become a part of the community and Corby Council are committed to using the building as a learning tool. They have also publicised case studies about the 'green' features of the building.

Now that the building has been in use for a full seasonal cycle a post occupancy review has been scheduled with the client.



## Waste reduction:

The original client brief was for two buildings and Hawkins\Brown consolidated them into one, mixed use building that works hard and reduces cost, materials and energy use. Not only this, but the adjacent site earmarked, was then available for another redevelopment project.

The contractor also used best practice construction methods including monitoring of all CO<sub>2</sub>, energy, transport and water use on site. They also set and met recycling and landfill diversion targets for site waste, as well as reduce noise and dust generation.

## Biodiversity:

The Cube incorporates large-scale public realm works as part of a masterplan to regenerate Corby and was built on a redundant brownfield town centre site. The landscaping was an integral part of the design from the outset and affected the siting of the building.

The roof incorporates generous public roof terraces, planted with full-size trees and feature sedum and brown roofs to enhance the site's ecology. These areas are also functional, as they provide a well loved back drop to wedding photographs after each marriage ceremony.

Irrigation is provided from the rainwater recycling facility.

## Access:

All facilities are arranged around an internal route coiled inside the cube form, allowing access for all. The most used public facilities have a ground floor presence and are all linked, arranged around a continuous route, which rises from the foyer through the building.

## OVERARCHING SUSTAINABILITY ACHIEVEMENTS

The design Hawkins\Brown proposed for the Corby Civic Hub was sustainable in conception, combining the original council brief for separate civic and arts facilities into a more vibrant whole. It is a fundamental belief of our practice that sustainability is not just about energy, but about social and economic factors too. By combining the elements of the brief we not only reduced embodied energy in materials use and servicing, but also created a building that is used 24 hours a day and works hard for its community. Concentrating activity in a single building maximises the marketing and regeneration impact for Corby and released an adjacent site for further development. This is now due to house a new cinema demonstrating the catalytic effect the Cube has had on generating a new civic and community focus in the town.

By organising the most public facilities to be seen from the re-landscaped surroundings the community are invited inside. Once inside they find that the main uses are organised along an open and accessible ramp, which leads them through the building. In fact, since the building was completed the library membership has increased exponentially because of its greater visibility in the public realm. This in turn has increased its funding, making it a more viable public service.

The building is adaptable and materials chosen are durable. It is predominantly daylit and naturally ventilated, while providing well designed, comfortable internal environments. It is the only theatre venue in the UK to receive an “Excellent” BREEAM rating.

## WHAT LESSONS WERE LEARNED AND WHAT CONCLUSIONS CAN BE DRAWN FROM THIS PROJECT?

As an example of a publically procured project this has achieved a high quality of design and retained the original aspiration. An International Competition was held to establish the best architect; Hawkins\Brown were chosen from Rogers Stirk Harbour, Raphael Vinoly and Fielden Clegg Bradley. This process allowed proper design discussion and confirmation of the client aspiration. The council have supported the chosen design since its inception.

Together with an aspirational building design the council have also employed high quality designers to generate a sustainable urban masterplan. They have also ensured this masterplan has been realised, supporting the building in its setting.

Building the new civic centre in the place of the existing facility ensured that infrastructure, while it was reorganised, was not completely changed. This has allowed the new building to seamlessly integrate into and enhance the existing urban environment.

The BREEAM requirement was integrated into the scheme at a relatively late stage in the design. Although the building was well designed from the outset to achieve the required standard this process would have been smoother, had the requirement been introduced earlier.

There were a few small site issues such as: the resolution of the very deep attenuated baffle boxes the library (to achieve required noise levels) and the alteration required to the sliding entrance doors, which let in too much cold air.

## CAMPAIGN FOR A SUSTAINABLE BUILT ENVIRONMENT



## **AWARDS WON FOR THE PROJECT:**

British Construction Industry Awards -  
Building Project £3m-£50m Category - Shortlist

Concrete Society Awards - Commendation  
Corby Cube, Northamptonshire

East Midlands Property Awards  
Design Excellence Category - Shortlist

FX International Interior Design Awards -  
Winner Best Public Building

Regeneration and Renewal Award  
Design Excellence Category - Shortlist

Regeneration and Renewal Award  
Mixed Use Developments Category - Shortlist

RICS East Midlands Project of the Year Award - Shortlist  
Corby Parkland Gateway - including Corby Civic Hub, Corby International Pool & Corby Interchange

RICS National Award  
Regeneration Category - Shortlist  
Corby Parkland Gateway - including Corby Civic Hub, Corby International Pool & Corby Interchange

International Property Awards in Association with Bloomberg Television  
Best Public Service Architecture , Northamptonshire  
Best Public Service Architecture, UK  
Best Mixed Use Architecture, Northamptonshire  
Best Mixed Use Architecture, UK

Civic Trust Award 2012 - shortlist

## **PROJECT COMMENTS/PRESS/QUOTES:**

Corby Borough Council's Chief Executive, Chris Mallender, said:  
'The Cube is an exciting symbol of Corby's vision and aspiration and personifies its desire to put top quality design at the heart of its regeneration and growth programme. It's truly an iconic building that brings together public and leisure services under one roof, making them more accessible for the people of the Borough.'

Phil Hope, former MP for Corby said:  
'This is the most astonishing building. It is a 21st century town hall... I can say this is the most dynamic civic centre not just in this region but across the country.'

Nick Bolton, Director of Investment and Marketing for the North Northants Development Company, said:

## **CAMPAIGN FOR A SUSTAINABLE BUILT ENVIRONMENT**

‘The Corby Cube is a building that any city in the UK would be proud of. A tremendous amount of work has gone into its planning and development and the result is a landmark community hub and revitalised entry to a regenerated Corby.’

Chris Sudworth, Creative Director, The Core said:

‘The theatre is a truly fantastic space, completely flexible, moving from flat floor to conventional proscenium arch, it really does offer us the opportunity to deliver almost anything.’

AJ quote 19<sup>th</sup> May 2011:

... 2011 has been momentous for Hawkins\Brown, bringing with it the opening of the game-changing Corby Cube....

Roger Hawkins, Partner Hawkins\Brown said:

‘By drawing together public agencies and facilities into a single cubed structure the Corby Cube presents itself as a new model for a 21st century town hall which is symbolic of an integrated joined-up approach. The Corby Cube brand is helping to promote all the facilities combined within the new building. The key driver for us however was making sure that the building worked. The quality of the building is that it is bigger on the inside, functioning as a lively 24-hour hub.’