

# Old meets new

A performing arts centre for **Cheltenham Ladies College** has combined a new building with a refurbished Grade II\* listed villa to provide a sustainable space that combines elements of both periods, as **Ella Taylor** discovers.



Photos by James Brittain



Parabola Arts Centre in Cheltenham is made up of a brand new auditorium building, complete with natural ventilation, and a glass link building joining this with a refurbished Regency stucco villa, listed by **English Heritage** (EH) as among the top 7% of important historic buildings in the county.

**Foster Wilson Architects** (named Tim Foster Architects until a name change in October 2009) led the design of the scheme, which is expected to use an estimated 20-30% less energy than a conventional auditorium of its size with mechanical ventilation and little daylight.

"Theatres are prodigious consumers of energy and this project has allowed us to realise our long-held ambition to design an auditorium which is entirely naturally ventilated. This will result in a significant reduction in energy use and the elimination of fan noise. It has been a ten-year ambition of the College to have a state-of-the-art facility and they had a strong desire that this building should be low maintenance and sustainable," said **Tim Foster**, partner at Foster Wilson Architects.

"Together with engineers **Max Fordham LLP** and main contractors **Willmott Dixon** we have produced a building that should perform exceptionally well in terms of energy use. We have also given new life to an important historic building, which is inherently sustainable."

## Refurbishment

Bayshill House is a 19th century villa bought by Cheltenham Ladies College in 2005 with a view to expanding its grounds. The refurbished building will provide teaching space and backstage areas for the theatre. As a Grade II\* listed building, EH was involved in the purchase and planning stages, but determined that the restoration of the fabric of the building would undergo as part of the project would be beneficial.

As Foster Wilson Architects says: "The project involved careful negotiations with the Conservation Authorities and local residents to provide a scheme which is sympathetic to the listed building and the Conservation Area in which it stands. The project was selected by English Heritage as an exemplar scheme for their *Constructive Conservation in Practice* publication."

A former car park has been replaced with traditional 19th century gardens and a carriage drive, but EH also identified some elements which could be changed, such as a 1970s office extension, subject to conditions surrounding heritage conservation. The 70s extension was demolished, the old concrete frame crushed for reuse off-site, and the new building was constructed alongside the old.

## New auditorium

The external walls of the 320 seat auditorium are built from Bath stone, to reflect the classical villa, yet the new

building is distinguishable from its rectangular neighbour by its oval shape. An exposed concrete frame and masonry walls provide good thermal mass to help with natural ventilation systems.

Natural ventilation in the new building negates the need for mechanical systems and their associated energy demand. A plenum in the basement introduces fresh air into the building, which then rises through floor vents and leaves the building through mechanised flaps in the roof.

Natural lighting is also maximised for every day use through five large windows at either end of the theatre, which have external louvres to reduce solar gain. The windows can also be covered with timber shutters to exclude light and noise during performances.

Parabola Arts Centre was chosen as one of 20 exemplar 'heritage-led developments' in the UK by EH. Main contractor Willmott Dixon was named as the greenest construction company in the UK by the *Sunday Times* Green List.

The theatre itself, inside, exposes materials in their raw state, perhaps to highlight the natural strategy of the build. Fair faced brickwork, exposed concrete columns and slabs and Douglas Fir joinery on the balcony fronts, doors and shutters are all on show, with the timber of course being both a local and sustainable material.

English Heritage said of the project: "With advice from **Cheltenham Borough Council**, the College developed designs which, with minimalist contemporary detail, subtle classical proportions and thoughtful use of materials, will enhance this part of Regency Cheltenham."

► <http://www.fosterwilsonarchitects.com/>  
 ► <http://www.english-heritage.org.uk/server/show/nav.19797>