



Lichfield Garrick project

## Lichfield Garrick Project

<b>Contractors:</b>	Interserve Ltd.
<b>Client:</b>	Lichfield District Council
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The Lichfield Garrick project involved the creation of an arts venue from the conversion of an existing municipal hall. The original 1970's building had become the home of a thriving local arts scene and provided a venue for professional entertainment. However it was basically a 'brick container' designed for every conceivable civic activity, and by the 1990's it was recognised that it could no longer cater for the needs of professional theatre productions or the expectations of audiences. There was no backstage area, no pit and the stage area was completely inflexible. The original hall therefore closed its doors in 2001 with construction on the new Lichfield Garrick beginning the following year.

Although some structural walls and floors were retained, the building was expanded in all directions to create a 490 seat auditorium and a studio with a capacity of 200. The main auditorium was created in the 'grand tradition' of 'proper' theatres and incorporates boxes with curved fronts, a circle and traditional proscenium arch. The additions of a fly tower and orchestra pit were essential for accommodating musical productions by local amateur companies, as well as professional opera, ballet and other touring shows. Outside the main performance areas, there are also four gallery spaces for visual arts exhibitions and building is also home to the local tourist information centre.

After an 18 month build, the Lichfield Garrick opened for business on 1st July 2003. A review of the first production, Corin Redgrave's 'The Recruiting Officer', included reference to the building as a 'welcoming rosy-coloured theatre'.

*"I can certainly bid a hearty welcome to the £5.5 million building as a moral boost for the West Midlands and a step forward for eco-friendly architecture."*

DAILY TELEGRAPH

### Design Process

The public consultation for the scheme was lengthy and well-attended with the design process involving a broad range of stakeholders. The project was also politically controversial.

There was an enormous 'wish-list' for the building which had to be painstakingly rationalised. The needs of each interested group were carefully taken into account and the maximum level of consensus was aimed for, but it was important to avoid having a finished product that could do 'anything and everything not very well'.

The attempt to be wholly inclusive was clearly problematic, demanding serious compromises if all stakeholders were to be satisfied. The case was made, therefore, to make a 'real' theatre with an excellent acoustic, and a proper auditorium with its own recognisable atmosphere. The community was persuaded by this, but demanded a separate, flat-floored, studio as a compromise, thus providing a 'village hall' space. A competent technical committee, made up from members of the public, was helpful in selecting appropriate technical systems so that amateurs, as well as professionals, could make full use of the facilities.

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Theatre Auditorium

It was established that the main auditorium should have around 500 seats, in order to fill a gap that was apparent across the whole Birmingham area. The 'miniaturised' fly-tower was constructed at a considerable cost reduction compared to the standard option, and should be able to deal with 95% of the demands likely at a venue of this size.

The façade makes generous use of glass, to allow the public to see inside, and this is framed by a combination of tiling, terracotta air inlets and cedar 'half-timbering'.

### Funding

Funding for the project was raised through the sale of council houses together with assistance from the EU. There was no National Lottery Funding for the building itself; only for technical equipment.

### Sustainability

Lichfield District Council is committed to improving its sustainability credentials through a variety of methods including green transport plans and alternative heating methods, and is consistently among the top 10 most sustainable Local Authorities in the UK in terms of its waste management strategy:

#### 1. Ventilation:

This project is one of the first public buildings in the West Midlands to use natural ventilation with the aim of significantly reducing energy use and CO<sub>2</sub> emissions. It uses a non-mechanical system which keeps the building comfortable and airy.

This was a major challenge given the very specific environmental characteristics of theatre auditoria which are densely occupied for relatively short periods of time and sparsely occupied between performances, by actors and technicians. They also have very high lighting loads.

Achieving optimum comfort was therefore extremely complex and the design team, *Short & Associates*, were chosen for their experience in naturally ventilated buildings as well as their general sustainability credentials.

The use of a heat exchange system means that naturally occurring heat gains drive a flow of air out of the warmer spaces through high-level openings (large stacks on the roof), making way for cooler, fresher air to enter at low-level. The fresh air is introduced through large air ducts below the seating area via Finn heaters and dampeners. Computational Fluid Dynamics (CFD) modelling and wind-tunnel analyses were used to determine the likely performance of the system and were extended to predict the behaviour of a theoretical fire within the auditorium. Noise management has also been included in the design.

During a recent heat wave, when temperatures exceeded design conditions, internal temperatures remained comfortable for most of the time and for longer periods than expected (internal peak temperatures were up to 10 degrees lower than external peak temperatures).

This passive air handling system seems capable, therefore, of satisfying the competing requirements of the actors, the audience and the lighting systems. In addition, every opening within the existing building has been exploited – transformed into intakes or outlets. A state-of-the-art building management system also allows the ventilation to be carefully regulated as well as monitoring performance in the operational phase over the next 10 years. The BP institute from Cambridge University is also involved in extensive monitoring.

#### 2. Transport:

The site is in the centre of Lichfield, next to the bus station and close to other public transport. Lichfield's 2 train stations offer direct services to a range of locations including Birmingham and London.

### 3. Materials:

The use of the existing building kept costs to a minimum as well as allowing the reuse of materials and, therefore, making lower embodied energy demands. Where additional building materials were necessary, these were procured from local sources wherever possible. The use of MDF and PVCs was avoided unless absolutely necessary. £2m was saved by reusing/recycling the side walls and foundations of the existing building.

### 4. Social sustainability:

As a department within Lichfield District Council, the Lichfield Garrick is helping to achieve one of the council's main strategic objectives of providing residents with a better quality of life.

In depth consultation was carried out with stakeholders from all the arts groups expected to use the facility, in both the design and development stages, with the aim of incorporating maximum flexibility into the building. New social spaces, such as the 'village hall' space, as well as an expanded foyer comprising three new floors, were introduced. Two new floors of backstage space were also constructed. Customer satisfaction regarding the new facilities is being monitored to assess the comfort factor with regard to the heating and ventilation.

During the daytime, the entire front of house area is used by the community. Art works hang on the walls and pensioners have meetings over tea and cakes. In addition, the smaller studio space is versatile enough to be used for films, conferences, weddings and smaller productions. The main auditorium has been reversed and the main front of the theatre rotated 90 degrees, facing what is now becoming a new urban square. The district council aimed to landscape this space as soon as possible.



Lichfield Garrick Theatre

### Lessons Learned

- Lichfield District Council has already decided not to use traditional procurement for this type of project in the future. Instead, they are investigating partnering as the preferred method for other projects.
- The innovative air handling system was the deciding factor in the building being nominated for, and winning, a number of awards including:
  - Building Services Award 2004
  - Green Apple Award 2004 for Environmental Best Practice
  - Constructing Excellence Award 2005
  - South Staffordshire Design Award 2005

*"David Rimmer's building, depending on a natural ventilation system, is literally a blast of fresh air in regional theatre: spacious, elegant, and with a comfortable 490 seat main auditorium, the theatre harmonises perfectly with the town's Georgian character."*

*Anne's England, The Guardian.*

*"This delightful building has a living connection to the local council which pays for it; with the management team which encourages so much to happen in it; and with the community which both uses it and informed its design at every stage."*

*Thom Gorst, Professor of architecture and head of the Birmingham School of Architecture & Landscape.*