

Building sustainable theatres today for a better tomorrow

Last year's Theatres Trust conference, *Performing Theatres?*, highlighted the diversity in design and use of UK performance spaces - old and new. This year's conference, *Building Sustainable Theatres*, highlights a design consideration they will all need to have in common, as Conference Reporter *Sarah Rushton-Read* explains

Right: The National Theatre is examining sustainable adaptations across the whole of its estate
Photo: Fran Birch

In the simplest terms, buildings in the UK are responsible for 47% of the country's energy consumption. The Government's Climate Change Bill has legislated for a 60% reduction of carbon emissions by 2050. It is clear therefore that all venues, old and new – if they haven't already – will need to make concerted efforts towards cutting their carbon emissions and increasing sustainability.

Theatres, just like any other building, will need to operate in an energy efficient manner if they are to remain viable and not cost the earth to run. Most inhabit built structures and use generated energy to function; all have to meet the rising costs of the bills.

How this is driven, legislated for, applied and developed is a complex matter and, unsurprisingly, up for debate. What is clear however is that sensible outcomes rely on those in a position to inform and stimulate change having access to the necessary knowledge and expertise they require to make informed choices.

So what can we, as an industry, do today to ensure our venues have a positive impact, not just on audiences and those who inhabit them, but also on the environment around them? On 10 June 2008, in a bid to answer some of the most pressing questions and issues on the subject, experts at the vanguard of theatre design and development, engineering, specification and usage will come together at The Theatres Trust's annual conference in the Cottesloe Theatre at London's National Theatre. This is an opportunity for them to present and discuss their views and join in the wider debate on how we reduce theatres' carbon footprint.

Diverse by their very nature, there is no single, one-stop solution when it comes to reducing carbon emissions or ensuring increased sustainability in theatres and

performance spaces in general. From historic, Grade I or Category A listed buildings, to brand new, state of the art developments; refurbishments or extended buildings; found or temporary spaces – each has different specification requirements when it comes to sustainability. Many venues may not have even started life as a theatre, so naturally have their own particular idiosyncrasies. You can't even judge the book by the cover; the most old-fashioned buildings provide homes for some of the most modern ideas and practices, and vice versa.

How and when a venue is used, its geographical location, where it is in relation to other buildings, what it is built from, plus an abundance of other factors must be taken into account when deciding the best road to take. It's no simple task either; look hard at the considerations made when evaluating a building's potential for improved sustainability and you'll realise it throws up some surprising facts, often challenging the most entrenched popular perceptions.

For example, many pre-war buildings are better built in terms of energy efficiency than their post-war counterparts. The answer, therefore, is not always to rip old buildings down and build new ones in their place. In any case what might the environmental cost be of tearing down an old building and replacing it with new? Neither is it always appropriate to apply new technology to old problems. Sometimes it's about making existing infrastructure more efficient, maximising inherent building and system characteristics and using appropriate materials and plant efficiently.

Of course, it's not just the big dramatic gestures that make the difference either. There is much we can do as a matter of choice by integrating better habits into

everyday life – at home and at work. Inefficient use of general building facilities, such as unnecessary use of lighting and heating, poor insulation, and the squandering of water through leaks and dripping taps are all major contributors to the waste and environmental costs associated with a building. These issues are as much about good management and instilled work ethics as they are about legislation and law, and numerous venues are now broaching this head on. It makes little sense to install state of the art energy efficient systems unless they can be backed up by day-to-day good practice and a mind-set to create change. This attitude needs to be instinctive – otherwise our more substantial efforts to reduce carbon emissions could be compared to that of applying Elastoplasts to gaping wounds!

Fortunately there are many at the vanguard of theatre development embracing these considerations from the ground up, in day-to-day professional activities. *Building Sustainable Theatres* will provide the opportunity to share valuable experiences and knowledge in a stimulating way. Moderated throughout by Nigel Hinds, executive producer of Lift Festival's new mobile venue, the programme for the day starts with their welcome, followed by a formal opening by the Rt Hon Margaret Hodge MBE MP, the Minister for Culture.

Sunand Prasad, the President of the RIBA and a leading champion of climate change will give the Keynote Address. He is one of twelve experts on the Government's Eco-Towns Challenge Panel challenging developers to meet the highest standards possible for sustainability and design. Sunand will then join Richard Simmons CEO of CABE, John Graham CEO of Historic Scotland and Ruth Mackenzie,



Expert Adviser for the DCMS who will each give a perspective on the challenges facing theatres, including their use as performing arts venues, their architecture and design and their historic fabric. This will be closely followed by questions and debate led by Jon Snow relating to the risks and impacts on existing and future theatres.

After a break, what promises to be a lively panel discussion on existing theatre-led initiatives and the government legislation creating the framework for change will follow. The panel of experts comprises: Gus Christie, executive chairman of Glyndebourne Festival Opera, whose plans to erect a wind turbine on the Sussex Downs went to public inquiry, but received the support of David Attenborough; Alistair McGowan,

actor, impressionist and ambassador to the World Wildlife Fund; Peter Gingold of TippingPoint - a network-based organisation and 'connector' of the arts and climate science worlds; and Dr Ben Todd, executive director of the Arcola Theatre, London, which aspires to be the world's first carbon neutral theatre. Discussion will also focus on the work that the theatre industry in London has been doing with the Mayor of London, looking at ways in which the industry can become greener. It has been working on a plan which identifies the total carbon footprint of theatres in the capital, and gives practical suggestions including undertaking audits, involving staff, reviewing procurement and management policies, better metering and energy management, and making

capital improvements. A stimulating, lively and informative element of the programme, there will be plenty of time for questions from delegates and outcomes can be 'chewed' over during lunch.

In the afternoon, contributors will discuss the planning and management of capital theatre developments for a zero-carbon 2019. By looking at issues surrounding design, development, procurement, construction and handover in new build; refurbishment with new addition; and listed building restoration, the subject will be approached from a variety of insightful perspectives led by Ruth Eastwood.

Firstly, Donna Munday, formerly chief executive of Northampton Royal & Derngate, will take us through her experiences of being a client on a capital project. Alan Short and



Plymouth's Theatre Royal has achieved national recognition for its energy efficiency after reducing consumption by 30%
© Lee Hinds

Alistair Fair will then follow to introduce the CBE/ACE Client Guide and present individual theatre capital projects.

Hot on their heels, chairman of the Association of Theatre Technicians (ABTT), Mark White, will be in discussion with Ian Smith of Max Fordham to review the effect, thus far, of the 2000 revisions to Part L of the Building Regulations, which came into effect in April 2006. (Parts L2A and L2B aim to reduce carbon emissions of non-domestic buildings by 25% from the 2002 standard. However, further revisions are likely if new buildings are to be zero-carbon by 2019. These will demand certification of performance, not only at design stages but also on completion, with tests being required on the completed building).

One of the distinguishing factors of this Part L from previous versions is that it is not nearly so prescriptive. Building designers have an element of flexibility in how they achieve target emission rates – whether it is by the use of more thermally efficient fabric, efficient plant and even renewable micro generation. The debate also incorporates work done by the ABTT, the District Surveyors Association, and now the Institute of Licensing, to integrate sustainability into theatre design and technical standards handbooks.

The early afternoon session will culminate in a discussion on the efforts being made to achieve sustainability and low carbon comfort on the Royal Shakespeare Theatre's Transformation project. After a presentation from team member Stephen

Jolly of Buro Happold, Peter Wilson, project director for the RST and project architect Rab Bennetts will open up the session to questions from the floor.

Following an afternoon break, Ian Blackburn, director of the Southbank Centre Project, leads a session on practical strategies for implementing environmentally positive adaptations to theatres. Chairing a panel of respected practitioners, he will introduce Kevin Faulkner, who will describe the practicalities of retrofitting Plymouth Theatre Royal; Natalie Lewis of the Ambassador Theatre Group, who outlines the importance of an environmental policy, good planning, training and technical implementation; David Richards of Arup, who will summarise what's involved in



A TippingPoint event in Potsdam, Germany, bringing the worlds of arts and climate science together

energy performance certificates and display energy certificates in a theatre; Lee Collins of Theatr Brycheiniog discusses how a solar installation will be benefiting his venue; Ben Robinson of the Low Carbon Partnership tells us how early adaptation offers long-term benefits and gives advice on how to fund the fitting of renewables; and finally National Theatre, theatre manager John Langley will discuss sustainable adaptations made across the National's estate. All will be happy to receive questions from the floor in what will raise some truly practical and inexpensive solutions for age-old problems.

The Theatres Trust's conference *Building Sustainable Theatres* promises to be bursting with interesting and valuable information and supported by lively debate. Tying all

this together with his closing address will be Peter Head, named by *The Guardian* in January 2008 as one of the '50 global Green Heroes who could save the planet'. Director of Planning and Integrated Urbanism at Arup, he is the project director for Dongtan eco-city in Shanghai, and is recognised as a world leader in sustainable development in cities. In 2002, the Mayor of London appointed Head as an independent Commissioner on the London Sustainable Development Commission, and sustainability adviser for the London 2012 Olympics and Paralympics.

So, whatever your views on the causes and solutions for global warming, it's clear that, like many other public buildings, theatres will have to make every effort to reduce energy consumption and waste,

manage costs, cut down on pollution and increase the use of sustainable or renewable energy sources – after all even the biggest waste bins fill up and overflow eventually.

Whilst many are banging from the same big drum when it comes to preserving the environment, it doesn't automatically mean they keep the same rhythm. Hopefully, by exchanging knowledge and listening to the experiences of theatre and construction industry experts, we will find a way to build a positive symphony of environmental change that can exert its influence far beyond theatre. Even a 1000-mile journey starts with a single step.

Sarah Rushton-Read is a freelance reporter and Conference 08 Reporter.