



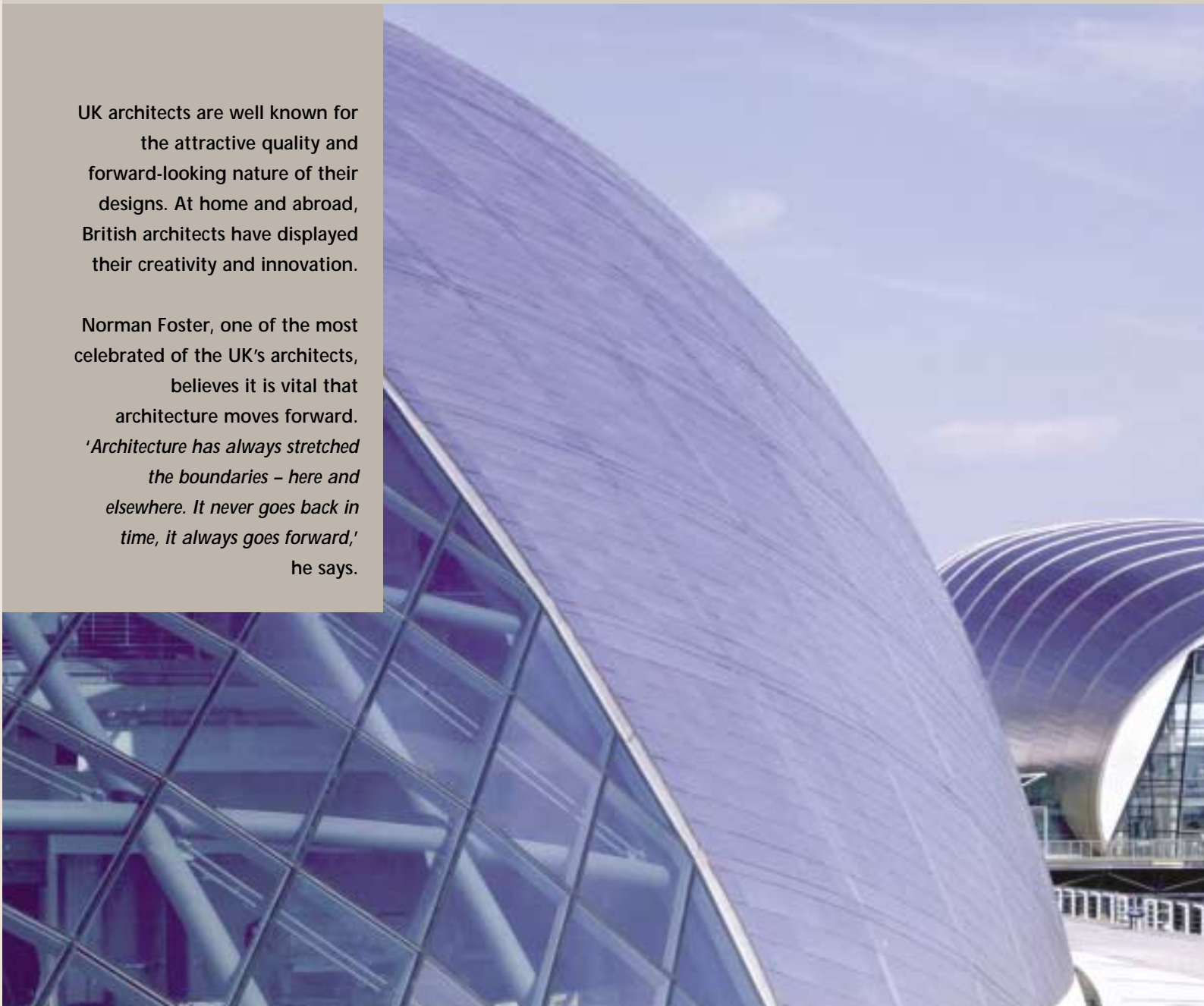
Foreign &  
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*!Inspire*

# UK Architecture

UK architects are well known for the attractive quality and forward-looking nature of their designs. At home and abroad, British architects have displayed their creativity and innovation.

Norman Foster, one of the most celebrated of the UK's architects, believes it is vital that architecture moves forward. *'Architecture has always stretched the boundaries – here and elsewhere. It never goes back in time, it always goes forward,'* he says.





The London eye  
passenger capsule.

Cover and below:  
Glasgow Science Centre.

There are around 6,000 private architectural practices in the UK, and in 2000 there were 20,900 architects in full time employment. Private practices earn 90% of the estimated £1.7 billion (1998) earnings in the entire market, the remaining 10% is earned by other organisations which provide architectural services, such as local authorities.

Other areas of income for practices are feasibility studies, planning consultancy and interior design, and other activities that use the work of architects include, landscape architecture and lecturing.

A growing number of architects are also involved in a range of consultancy services in fields such as conservation.

Many architects work abroad, mainly in the USA, the Far East and in Europe. In 2000 it was estimated that around 3,800 British architects worked overseas, and in 1999 £68 million was earned abroad.

Sir Stuart Lipton, Chairman of the Commission for Architecture and the Built Environment (CABE), observes: 'UK architects are not only skilled designers, but they are excellent at master planning, community planning, and their technology is undoubtedly good. So they have a world market. In world terms UK architecture is well placed to capture more and more market share.'

Public funding, particularly through the distribution of National Lottery money, has driven much of the renaissance in architecture in the UK. In 2000, contracts relating to National Lottery funding for arts and cultural projects were worth more than £380 million.

The UK has a long tradition of creativity. Peterjohn Smythe, one of those responsible for designing the new Dorset village of Poundbury, says: 'If you look to the past you'll find that in the UK and all over Europe the ordinary towns and villages are things of beauty.'

Demographic changes will play a vital role in the future of architecture. Single-person households in the UK are increasing, which means that more houses will need to be built. Furthermore, the rise in the home being used for work, leisure and living, means that homes will need to be designed to accommodate a larger variety of functions.

Sustainable construction will have an impact on the activities of architects. Prefabrication, intelligent materials, energy-efficient ventilation and combined heat and power are just some of the innovations.





## The Eden Project, Cornwall

Huge intersecting domes nestle in a rocky 50 metre-deep crater (see above). Inside these two micro-lightweight super-strong structures are recreated two of the earth's climates – 'biomes' of the warm temperate zones and the humid tropics.

The domes house the Eden Project, the world's largest conservatories, in an abandoned china-clay quarry in temperate Cornwall. Inside, 20,000 trees and 4,000 different species of flowers and vegetables are dispersed over slopes, terraces and cliff faces.

Architect Nicholas Grimshaw has used the 'geodesic' dome pioneered in the mid-20th century by Buckminster Fuller, to enclose a maximum volume with minimal materials and maximum transmission of light. Each panel is an inflated envelope of ETFE (ethylene tetrafluoroethylene), a derivative of oil. This feather-light material, in domestic use as cling-film, makes it possible to enclose such huge spaces and to stage the Eden Project's plant spectaculars.

Client: The Eden Project Ltd  
 Civil and Structural Engineer: Anthony Hunt Associates  
 Main Contractor: Sir Robert McAlpine/Alfred McAlpine Civil Engineering  
 Completion Date: March 2001  
 Build Cost: £57m  
 Architect: Nicholas Grimshaw & Partners ([www.ngrimshaw.co.uk](http://www.ngrimshaw.co.uk))

## Millennium Stadium, Cardiff Arms Park

HOK Sport, the architects of this magnificent stadium (shown below), have made the spectator paramount. Whether seated in one of the stadium's three tiers, or the additional row of executive boxes, every spectator is close to the action. The noise and atmosphere that spectators create when the roof is closed is electrifying.

The retractable roof is innovative. Two 55 metre by 76 metre, 4,000 tonne panels can close 33 metres





above the turf, within 20 minutes. It allows year-round use and perfect conditions whatever the season or weather.

But the grass needs light, more light than is possible, even with the roof fully open. The architects' solution is novel – the grass is grown outside of the stadium in modular pallets that have their own in-built heating, ventilation, irrigation and drainage. The pallets can be easily lifted out, or moved around the pitch.

Client: Millennium Stadium Ltd  
Structural Engineer: WS Atkins  
Main Contractor:  
John Laing Construction  
Completion date:  
September 1999  
Project Cost: £130m  
Architect: HOK Sport  
([www.hoksport.com](http://www.hoksport.com))



## Sainsbury's Supermarket, Greenwich

On entering this supermarket, customers are struck by natural light which streams through the glazed roof. With this light and the wide aisles, it feels more like a covered market square than a traditional store.

Sainsbury's believes this is the most environmentally friendly supermarket in the world. Using 50% less energy than the average store, it has an 'excellent' environmental rating from the Building Research Establishment.

The walls are of natural stone, from the site excavations, and grassed over earth banks, five metres thick, insulate the sides of the building. Boreholes 70 metres deep push up warm air through floor vents and on sunny days roof louvres control both daylight and solar heating. Solar panels and two wind turbines power the sign on the façade.

Inside are more energy-saving features. Checkout matting is made from recycled tyres and the panelling for the toilet walls from melted plastic bottles. Rainwater filtered through the reed bed in the small nature reserve behind the store is used to flush the toilets.



Customers love the cool and comfortable environment and voted it the People's Choice in the UK's Building of the Year awards.

Client:  
Sainsbury's Supermarkets Ltd  
Structural Engineer: WSP  
Consulting Engineers  
Contractor: RGCM Ltd  
Completion Date:  
September 1999  
Contract Value: £13m  
Architect: Chetwood Associates  
([www.chetwood-associates.com](http://www.chetwood-associates.com))



Far left: Armagh Theatre auditorium.

Left: Theatre and Arts Centre across Market Square.

## Armagh Theatre and Arts Centre

In this building Glenn Howells Architects have designed a building which, although austere in look – finished inside and out in stone – is completely at one with its setting.

A glass-fronted foyer leads to the various parts of the building, with a running stair linking the different levels. These uncluttered, almost spartan interior spaces, full of light and air, generate a sense of calm.

The architects have exploited the complexities of the site to full advantage. The gallery and art studio, which don't require natural light, are dug westwards into the hillside. The raked floor of the theatre, with its 400-seat auditorium, uses the slope of the hill eastwards.

Client: Armagh City and District Council  
Structural Engineer: Dewhurst Macfarlane & Partners  
Contractor: Gilbert Ash Ltd  
Completion Date: April 2000  
Contract Value: £6m  
Architect: Glen Howells Architects ([www.glennhowells.co.uk](http://www.glennhowells.co.uk))

## Music Centre, Gateshead

The Music Centre, Gateshead (shown below) is a majestic landmark building, with Norman Foster revisiting one of his most consistent themes – the creation of magnificent internal public spaces.

The 'shrink-fit' undulating roof swoops dramatically down over the seven internal buildings. Striking curved terraces link them. The principal terrace or concourse has cafes, bars and shops.

The high main hall is designed to achieve a matchless acoustic for unamplified music. The floors and ceiling are wood. Other surfaces are hard and reflective. Ceiling panels can be moved up and down and the total room volume adjusted for the size of orchestra.

The decagonal hall is an entirely separate venue with its own atmosphere. Again, the acoustics are the main concern, with a large volume of space above the visible ceiling which can be reconfigured for different kinds of music. The hall can also be turned into an informal cabaret setting with seats at tables.

The architects consulted widely with users, audiences and artists. The centre will offer both world-class concert facilities and major opportunities for local people.

Client: Gateshead Metropolitan Borough Council  
Specialist Engineers: Buro Happold  
Acousticians: Arup Acoustics  
Consultant: Mott MacDonald  
Opening date: October 2002  
Contract value: £60m  
Architect: Foster and Partners ([www.fosterandpartners.com](http://www.fosterandpartners.com))



Below: Palais de Justice, Bordeaux,  
designed by Richard Rogers Partnership.



## Architectural training

Architectural training in the UK enjoys a world-wide reputation. It is both thorough and demanding and successful students need to be both creative and disciplined. There are 35 recognised architectural schools, most offering five-year full-time study, some offering longer part-time study. Practitioners then need to gain a minimum of two years practical experience, usually combining this with part-time study on day release or at evening class, before they can qualify and call themselves an architect.

A quarter of all architecture students come from outside the UK and one third of new students are women.

## Contacts

The Royal Institute of British Architects (RIBA)  
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[www.architecture.com](http://www.architecture.com)

Commission for Architecture and the Built Environment (CABE)  
Tower Building, 11 York Road,  
London, SE1 7NX  
[www.cabe.org.uk](http://www.cabe.org.uk)

The Engineering Council  
10 Maltravers Street, London,  
WC2R 3ER  
[www.engc.org.uk](http://www.engc.org.uk)

The Institution of Chartered Engineers  
One Great George Street, London,  
SW1P 3AA  
[www.ice.org.uk](http://www.ice.org.uk)

The Royal Institution of Chartered Surveyors  
12 Great George Street, London,  
SW1P 3AD  
[www.rics.org.uk](http://www.rics.org.uk)

Trade Partners UK  
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[www.tradepartners.gov.uk](http://www.tradepartners.gov.uk)

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## Sources

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