

Rooms with a view ● ● ● ● ● ● ● ● ● ● (of the future)

In today's concrete jungles, sustainable architecture is – literally – breaking new ground. Green building principles – which seek to provide both the best structural performance and to conserve water, land and energy – are changing the way buildings are designed, built and run.

Green architecture is becoming more and more popular. Corporations and governments are increasingly signing on. Building green can reduce energy consumption (and thereby running costs), as well as increasing productivity, health and morale in the employees, students – or even shoppers – inside.

A **Condé Nast Building, New York.** Architects: Fox & Fowle, 1999

Right at 'the crossroads of the world' – New York City's famed Times Square – the Condé Nast Building (home to the publishers of Vogue, Glamour and GQ magazines) was one of the first-ever green skyscrapers. A massive network of recycling chutes services each of its towering 48 floors. Two fuel cells use natural gas instead of fossil fuels to supply the building with all its night-time electricity, and 5 per cent of its massive daytime needs. The exhaust gases are then used to heat the building and provide hot water, while specially glazed windows allow daylight in and filter out ultraviolet rays.

B **Swiss Re Tower, London.** Architects: Foster and Partners, 2004

Londoners have affectionately dubbed the Swiss Re Tower 'the Gherkin' for its uncanny resemblance to a giant pickle on the city skyline. The global reinsurance company – which has taken a lead in calling attention to the dangers of climate change – made its words concrete when building its offices. The 180-metre tapered glass tower, which rises above a ground-level plaza of restaurants, shops and cafes, is within easy walking distance of public transport and uses 50 per cent less energy than a conventional building of similar size. Upwardly spiralling light wells circulate fresh air and natural lighting throughout its 40 floors, and exterior weather sensors monitor outside temperature, wind speed and sunlight levels, closing blinds and opening window panels as needed.

photo: Fox & Fowle Architects/Andrew Gordon Photography



photo: Nigel Young/Foster and Partners





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Edificio Malecon, Buenos Aires.

Architects: Hok Sustainable Design, 1999

The 12-storey glass tower Edificio Malecon is one of the most technologically advanced office buildings in Buenos Aires. It stands on a reclaimed brownfield site of old industrial land: its parking garage is built within the foundations of a 19th century warehouse. Its long, narrow shape and orientation from east to west are designed to minimize the amount of solar heat trapped during the hottest times of the year, while mechanized sunshades and windows deflect excess sunlight and harness cooling breezes from a nearby river. High performance, lightweight exterior panelling forms a glass curtain wall to protect the building from the elements while providing wide views from every angle.

photo: Daniela MacAdden/Hok Sustainable Design



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Menara Boustead, Kuala Lumpur.

Architect: Ken Yeang of T. R. Hamzah & Yeang Sdn Bhd, 1986

Menara Boustead, the Kuala Lumpur headquarters of the international information and technology company IBM, is an energy-saving skyscraper that aims to make use of the tropical climate. Windows and glass curtain walls maximize natural lighting throughout its offices and meeting rooms, as well as lobbies, lifts, lavatories and stairwells. A specially glazed curtain wall prevents the building's 30 floors absorbing excessive solar heat, while external fins and adjustable slats provide shade from the sun. Skycourts, terraces and atriums house plants and other greenery, increasing the supply of oxygen and sending natural ventilation through the building's core.

photo: T. R. Hamzah & Yeang Sdn Bhd

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The Green Building, Cape Town.

Architect: Mike Schroeder of the Development Action Group, 2003

The low two-storey Green Building, in Cape Town's Westlake Business Park, is built from recycled, local concrete brick and sustainably harvested wood, and boasts a passive thermal design that eliminates the need for air conditioning. If needed, the building can be flushed with cool night air through two chimney ducts linked to concrete pipes running underneath the ground floor. Roof-mounted photovoltaic (solar cell) panels turn sunlight into electricity, while a separate solar power system heats water for kitchens and bathrooms – including showers for those who cycle to work. Drainage systems channel household 'grey' wastewater and rainfall into surrounding fruit and vegetable gardens.

Another innovative green building – the Reichstag in Berlin – is featured in the 7 City Wonders on page 22.



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photo: Mike Schroeder, Cape Town