

SUSTAINABLE ARCHITECTURE

the 30-second architecture

3-SECOND FOUNDATION
The concept behind sustainable architecture is that our architectural-design decisions today should not negatively impact on the health, opportunities, or prosperity of future generations.

3-MINUTE ELEVATION
While environmental considerations dominate the discourse, ideas on sustainability have developed to include other areas – economic and social concerns in particular. Precise definitions of sustainability are difficult to agree on, resulting in the term being used for political or economic gain, a technique known as ‘greenwashing’. However, one thing is certain: in the developed world buildings are responsible for using a significant proportion of the planet’s finite resources.

Sustainable architecture emerged in the late 1960s with counterculture’s criticism of Modernism’s tenet that technology could solve any problem. The 1973 oil crisis was the first sign that a fossil-fuel-free future was essential, and sustainable architecture became linked with an awareness of finite resources. It has evolved to encompass several narratives, not least the threat of global warming. Architectural design responded with green architecture, which incorporates several key strategies. First, reducing energy consumption, which in colder climates essentially means using passive solar heating and conserving heat by improved insulation and using heat exchangers; in warmer climates, the emphasis is on excluding heat and using passive ventilation to reduce dependency on air conditioning. Second, adopting carbon-free energy generation for electricity and heating – such as photovoltaic panels and wind turbines. Third, using natural, replaceable, or recyclable materials, and taking account of the ‘embodied energy’ of building components as well as their extraction, transport, production, and eventual disposal or reuse. Ken Yeang’s bioclimatically designed building, Menara Mesiniaga (1992), in Subang Jaya Selangor, Malaysia, is a high-profile example of sustainable architecture.

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3-SECOND BIOGRAPHIES

JAMES LOVELOCK
1913–
British environmentalist

KEN YEANG
1948–

Malaysian architect, known for designing ‘green’ skyscrapers

30-SECOND TEXT
Steve Parnell

Designed in response to the specific climate of Malaysia, Menara Mesiniaga has in-built passive low-energy features, including solar shading, natural ventilation and lighting.

