

Sustainable material

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What is sustainability

“The ability to meet the needs of present without compromising the ability of future generations to meet their needs”

Bruntland commission 1987

Sustainable architecture

Sustainable architecture, also known as green architecture or eco-friendly architecture, is an approach to building design that prioritizes the health of the environment and the well-being of occupants. It seeks to minimize the negative impact that buildings have on the environment by reducing their energy consumption, resource consumption, and waste generation.

Sustainable architecture involves a range of design strategies and technologies, including:

Energy-efficient building systems and appliances: These include passive solar heating and cooling, high-efficiency lighting, and renewable energy technologies such as solar panels or wind turbines.

Water conservation: Sustainable architecture includes the use of low-flow toilets and faucets, and rainwater harvesting to reduce water consumption.

Use of sustainable materials: Building materials such as bamboo, reclaimed wood, and recycled materials are used instead of non-renewable or virgin materials. The use of locally sourced materials and building products reduces transportation and emissions.

Indoor air quality: The design includes using natural ventilation, air filtration systems, and materials with low VOC emissions to provide healthier air for occupants.

Site planning and design: Sustainable architecture considers the impact of the building on its surrounding environment, including how to reduce urban heat islands, and how to protect the local ecosystem and wildlife.

What is sustainable material?

- Sustainable material is any material that can be used in effective use without compromising its availability for use by later generations.
- These are generally renewable materials or materials which can be recycled or reused



Why sustainable materials?

Using sustainable materials helps to reduce the environmental impact of the products we use every day, and can contribute to a more sustainable future for all.

- Deforestation

Half of worlds forests have been altered, degraded or changed to other land use.

- Reduce CO2 emotion
- Pollution privation
- mining



Sustainable building materials characteristic

- Regional

(500 miles)

- Rapidly renewable

(Harvested in less than 10 years)

- Low in toxic or have none

- Recycled

- Energy efficient

- certified

Sustainable building materials Benefits

- Protect the environment
- Recognizes small and local businesses that promote sustainability
- Reduce waste
- Gives you better, more durable and innovative products
- Promotes and grow the green economy

Sustainable building materials

- **Bamboo**
- Bamboo: Bamboo is a fast-growing plant that is renewable, biodegradable, and requires fewer resources to produce than traditional wood. It can be used in a variety of applications, such as flooring, furniture, and textiles.
- Rapidly renewable
Materials that can be harvested in less than 10 years



Sustainable building materials

- **Cork**

Cork is a sustainable material that is harvested from the bark of cork oak trees. It is biodegradable, renewable, and can be used in a variety of applications, such as flooring, insulation, and furniture.



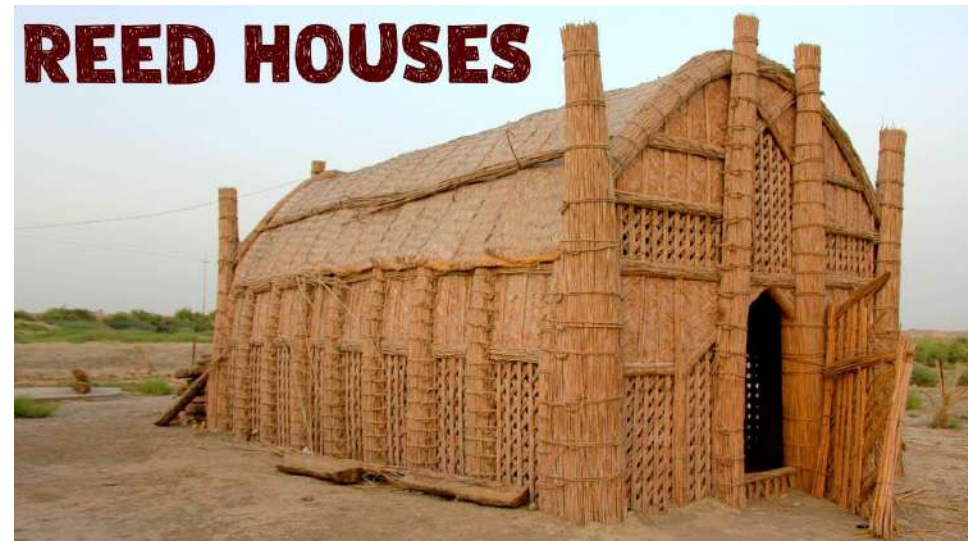
Sustainable building materials

- **Mud bricks**
- Mud bricks are made by mixing soil with water, placing the mixture into moulds and drying the bricks in the open air. To make it strong enough and sustainable, and straw could be added to help reduce cracking



Sustainable building materials

- **Reed** is considered to a carbon-neutral raw material, and it has been used for centuries for diverse uses. Its high availability and properties made it a popular building material.
- Reed considered a sustainable, eco-friendly, and low-cost option building material in south Iraq



- Wool: Wool is a natural and renewable material that is biodegradable and can be used to make clothing, carpets, and insulation. It is also naturally flame-resistant and can help regulate temperature and moisture.



Sustainable building materials

- **Recycled materials**: Recycling materials like plastics, metals, and paper can help reduce waste and conserve natural resources. These materials can be used to create new products, such as recycled paper, recycled plastic lumber, and recycled aluminum.



thank
you