

GREEN BUILDINGS

**BUILDING THE FUTURE WITH
INTENTION**



History of Green Building

**USGBC (The United States Green
Build Council) &**



**LEED (Leadership in Energy and Environmental
Design)**



LEED

In short, LEED is a system for designing, constructing, and certifying green buildings. Buildings are classified as Certified, **Silver**, **Gold**, or **Platinum** depending upon the number of points they acquire within 6 building components²⁰:

1. Sustainable Sites
2. Water Efficiency
3. Energy and Atmosphere
4. Materials and Resources
5. Indoor Environmental Quality
6. Innovation and Design Process



TOPICS

- Introduction To Green Buildings
- Importance of Green Buildings
- Materials Used In Green Constructions
- Merits & Demerits
- Green Building Concept In INDIA

Introduction To Green Buildings



SECTORS OF GREEN TECHNOLOGY

- Agriculture.
- Energy.
- **Buildings.**
- Transportation.
- Water and waste management.



The image features two prominent, cylindrical skyscrapers with a vibrant green facade. The buildings have a grid-like pattern of windows and are set against a grayscale cityscape background. In the foreground, a large blue thought bubble with a pink outline contains the text "Is this Green Building". The background shows a dense urban area with various buildings and a large bridge, likely the Sydney Harbour Bridge, spanning a body of water.

Is this
Green
Building

DEFINITION:-

It is the practice of increasing efficiency with which buildings use resources- energy, water and materials-while reducing building impacts on human health and the environment.

“Green building technology should reach all”

Concept:-

The 'Green Buildings' concept is gaining importance in various countries. These are buildings that ensure that waste is minimized at every stage during the construction and operation of the building, resulting in low costs, according to experts in the technology.



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The techniques associated with the 'Green Building' include measures to prevent erosion of soil, rainwater harvesting, use of solar energy, preparation of landscapes to reduce heat, reduction in usage of water, recycling of waste water and use of world class energy efficient practices.

A similar concept is natural building, which is usually on a smaller scale and tends to focus on the use of natural materials that are available locally.

How To Make Green Building?

A green building is a structure that is environmentally responsible and resource-efficient throughout its life-cycle.

These objectives expand and complement the classical building design, concerns of economy, utility, durability and comfort.





Importance of Green building.



Nowadays, we should make a way to maximize our natural resources and also help our mother earth to get some relief since pollution is everywhere plus the global warming that we are all experiencing. Non-renewable energy is expensive and unsafe but did you know that through green building we can save a lot of energy.

Before that, let's define first the meaning of *green building* (know also as green construction is the practice of creating structures and using processes that are environmentally responsible and resource-efficient throughout a building's life-cycle: from siting to design, construction, operation, maintenance, renovation, and deconstruction.

The importance of this is it lessen the consume of energy and the pollution as well because the more we use nonrenewable energy the higher the risk of pollution.

Materials Used In Green Constructions

Source of Material

- Renewable sources: Forests
- Reuse from waste: old plumbing , doors etc..



Wool brick

- Obtained by adding wool and a natural polymer found in seaweed to the clay of the brick,
- 37% More strength than burnt bricks
- Resistant for cold and wet climate



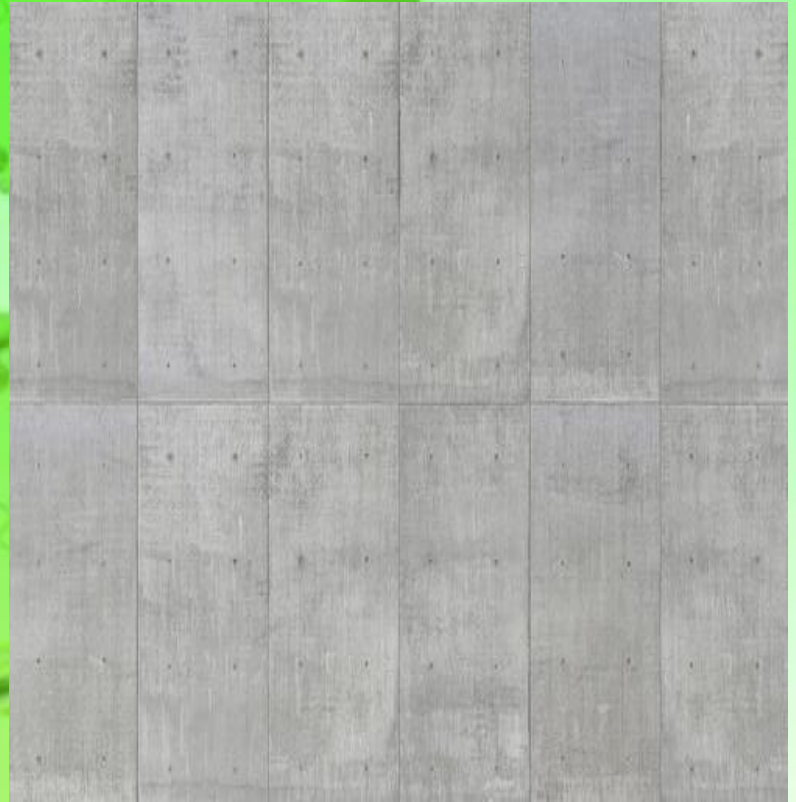
TIMBER

Wood is a product of trees, and sometimes other fibrous plants.



Sustainable Concrete

- Crushed glass
- Wood chips or slag - a by product of steel manufacturing.
- Reduces the emission of CO₂



Solar Tiles

- own electricity using the sun's power.
- Less wasteful.
- Satisfaction for many.
- Save money in the long run.



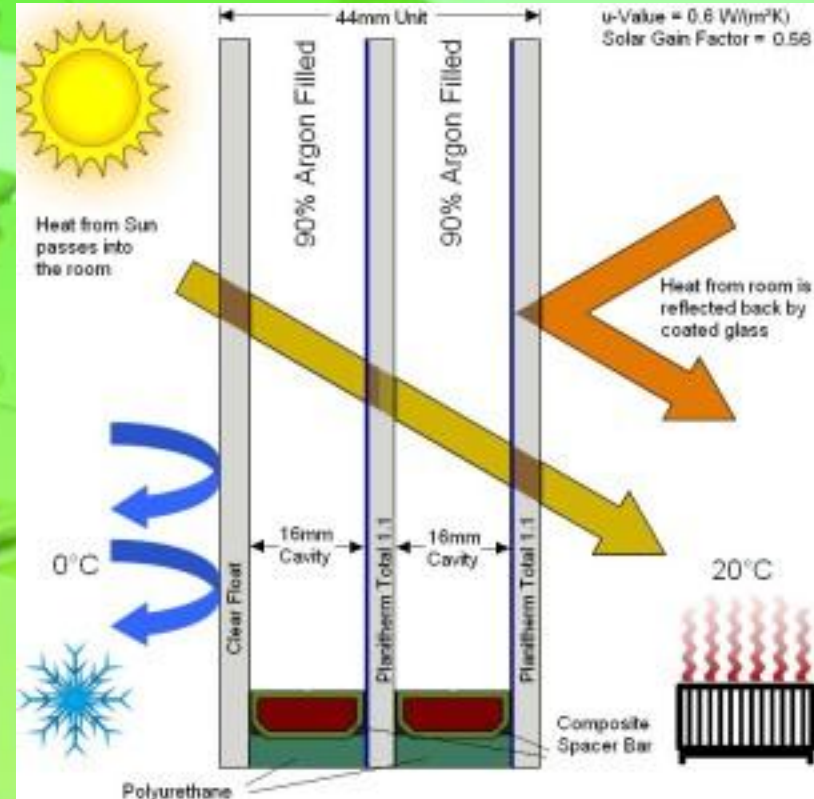
Paper Insulation

- Made from recycled newspapers and cardboard
- Then filled with chemical foam
- Insect resistant & fire retardant



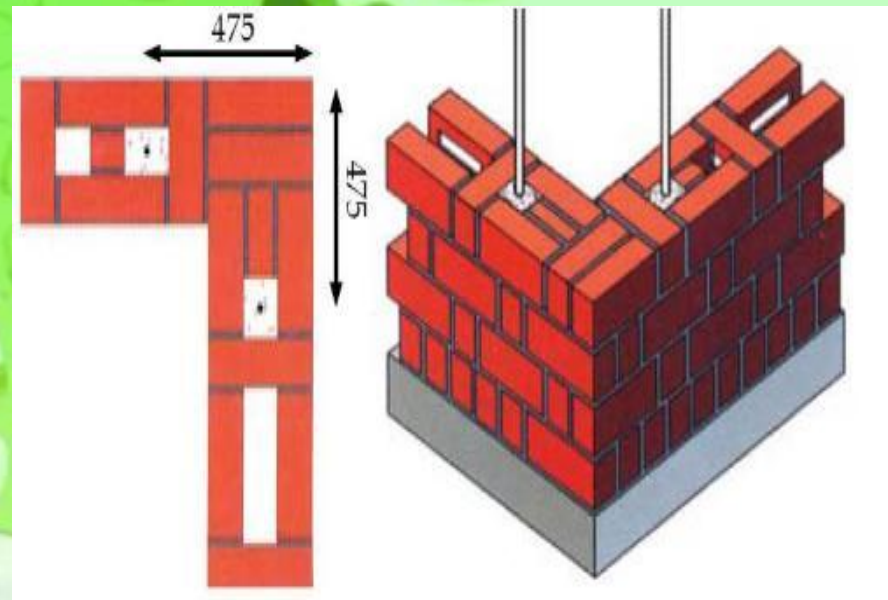
Triple-Glazed Windows

- ✓ Solar Gain
- ✓ Improved Energy Efficiency
- ✓ High Security
- ✓ Improved Sound Insulation
- ✓ More Comfortable Rooms
- ✓ Less Condensation

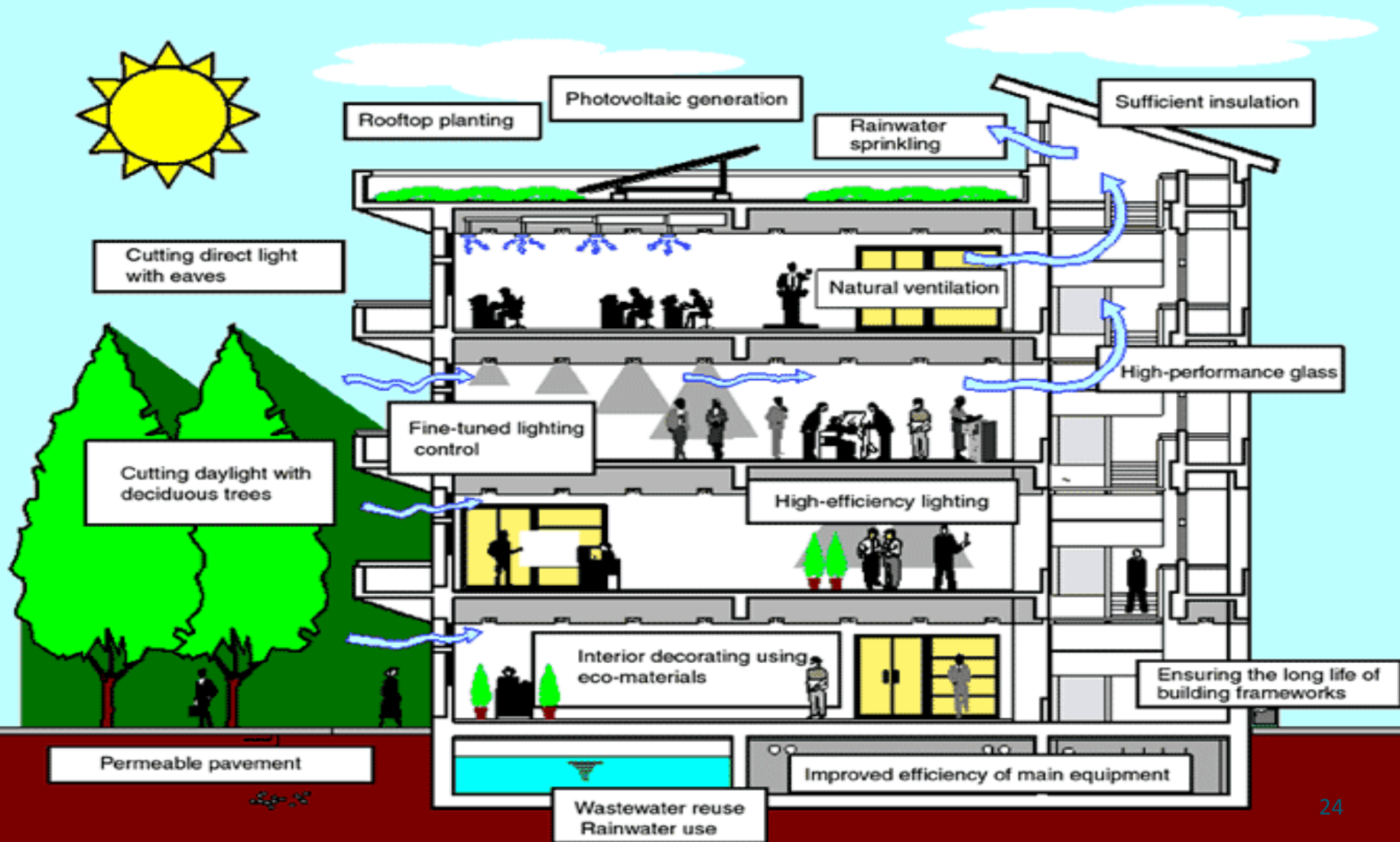


Eco Friendly

➤ Using Bamboo Replacing The Steel Bars



Typical Layout Of Green Building





Merits & Demerits Of Green Building

Merits Of Green Building

- Efficient Technologies
- Easier Maintenance
- Return On Investment
- Improved Indoor Air Quality
- Energy Efficiency
- Water Efficiency

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- Continue...
 - Waste Reduction
 - Temperature Moderation
 - Water Conservation
 - Economical Construction For Poor
 - Healthier Lifestyles and Recreation
 - Improved Health.

Demerits of Green Building

- Initial Cost is High
- Availability of Materials
- Need More Time To Construct
- Need Skilled Worker

TOP TEN GREEN BUILDINGS IN INDIA











GREEN BUILDING IN GUJARAT



GREEN BUILDING IN VADODARA



Thank you so much

