

# GREEN HOME .. A DAY-DREAM OR A REALITY..!

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## What is Green Home?

**Going green** is the latest trend towards which people from every culture are molding their lifestyles and opting for greener ways. People are looking forward to make their homes ‘green’ and environmentally friendly [1]. So, firstly it should be clear that what the ‘Green Home’ actually is.

**A green home is a type of house that is designed to be environmentally friendly and sustainable, focusing on the efficient use of energy, water, and building materials.** In general, a green home is a type of house that is built or remodeled in order to conserve “energy or water; improve indoor air quality; use sustainable, recycled or used materials; and produce less waste in the process.” This may include buying more energy-efficient appliances or utilizing specific building materials that are more efficient in keeping both cool and heated air inside the structure [2]. Not only can a greener home be more energy and water efficient, it also can have a reduced carbon footprint, be less expensive to operate, and be a healthier place to live [3]. Shortly, green home’s concept is just about creating better homes that are easier on the environment, less expensive over the long term, and more delightful to come home to [6].

## What is the History of Green Home Concept?

The original major modern turn to the green building movement began in the 1970s, after the price of oil began to increase sharply. In response, researchers began to look into more energy efficient processes, following in the wake of the earlier environmental movement. Many different organizations sprung up in the 1990s in order to promote green buildings and some were also dedicated to improving the knowledge of consumers so that they could have more green homes. The International Code Council and the National Association of Home Builders began the paperwork in 2006 in order to create a “voluntary green home building standard”. The Energy Policy Act was legalized in 2005, which allowed tax reductions

for homeowners that could show their utilization of energy efficient changes to their homes, such as solar panels and other solar-powered devices. In March of 2007, New Zealand bank Westpac became the “first New Zealand bank to offer a ‘green’ home loan [2].

## What are the components of a Green Home?

When one talks about a green home, the first thing which comes into mind is the usage of eco-friendly material in the construction of the house. Though a lot of people know that there exists something called eco-friendly material, most people have no idea what it really is. Green buildings are constructed in a way that the material used in building these homes are not only sustainable materials, but they use things which are also energy-efficient. This means that devices, gadgets, and electronic appliances are installed in the home which save energy and minimizes the use of anything which degrades the environment or depletes natural resources. This reciprocally helps to maximize the natural resources found in the environment [1].

## What does ‘green’ have to do with our homes?

Green building or sustainable building means being smart about how we use energy, water, and building materials so that we can live well without needlessly damaging the environment [6]. The buildings in which we live, work and play, protect us from nature’s extreme, yet they also affect our health and environment in countless ways. As the environmental impact of buildings becomes more apparent, a new field called ‘green building’ is gaining momentum. Green, or sustainable, building is the practice of creating and using healthier and more resource-efficient models of construction, renovation, operation, maintenance, and demolition [7].

## What is Green Building?

Green building 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. This practice expands and complements the classical building design concerns of economy, utility, durability, and comfort. Green building is also known as a sustainable or high performance building [7].

### Impacts of the built environment:

The built environment has a vast impact on the natural environment, human health, and the economy. Impacts of the built environment are as under [7]:

- Conserve and restore natural resources

#### Economic benefits

- Reduce operating costs
- Create, expand, and shape markets for green product and services
- Improve occupant productivity
- Optimize life-cycle economic performance

#### Social benefits

- Enhance occupant comfort and health
- Heighten aesthetic qualities

Aspects of Built Environment:	Consumption:	Environmental Effects:	Ultimate Effects:
Siting Design Construction Operation Maintenance Renovation Deconstruction	Energy Water Materials Natural Resources	Waste Air pollution Water pollution Indoor pollution Heat islands Stormwater runoff Noise	Harm to Human Health Environment Degradation Loss of Resources

Green buildings are designed to reduce the overall impact of the built environment on human health and the natural environment by [7]:

- Efficiently using energy, water, and other resources,
- Protecting occupant health and improving employee productivity,
- Reducing waste, pollution and environmental degradation.

There are a number of reasons to build green, including potential environmental, economic, and social benefits, mentioned below [7]:

#### Environmental benefits

- Enhance and protect biodiversity and ecosystems
- Improve air and water quality
- Reduce waste streams

- Minimize strain on local infrastructure
- Improve overall quality of life

### Components of Green Building

Components of green building include [7]:

- Energy Efficiency and Renewable Energy
- Water Efficiency
- Environmentally Preferable Building Materials and Specifications
- Waste Reduction
- Toxics Reduction
- Indoor Air Quality
- Smart Growth and Sustainable Development

### Types of Green Building

Every building type has different design and efficiency

needs depending on its function. These building types include [7]:

- Homes
- Commercial, Public, and Institutional Buildings
  - Retail Facilities
  - Schools
  - Laboratories
  - Healthcare Facilities

## Greening your Home but How?

Homes are a place where we spend significant amounts of our time on a daily basis. As such, it is very important to have a healthful home environment, including good indoor air quality [3]. So, it is good to adapt the process of greening your home. U.S. Green Building Council (USGBC) has been suggested 16 ways to green your home [4], mentioned as under:

### A) Lower Your Utility Bills

1. Switch to Compact Fluorescent Light Bulbs
2. Program Your Thermostat

3. Plug Air Leaks
4. Tune Up Your Heating and Cooling (HVAC) System
5. Choose Energy Star Appliances
6. Reduce Water Use
7. Switch to Green Power

### B) Choose Green Products

8. Buy Local
9. Use Low-VOC (Volatile Organic Compounds) Products
10. Use Wood Alternatives or FSC-certified Wood Products
11. Use Rapidly Renewable Flooring Materials

### C) Green Your Yard

12. Plant Trees to Provide Shade and wind Protection for Your House
13. Use Native Plantings
14. Use Nontoxic Gardening Techniques



Fig 1. Green Home – A Look [5]

**D) Green Your Transportation**

15. Carpool, Use Public Transportation, Walk or Bike When Possible
16. Buy a High-efficiency Car.

Shortly, greening your home, includes [3]:

- Reducing home energy use and using renewable energy,
- Reducing home water use and protecting water resources,
- Selecting the most environmentally friendly location for a new home,
- Choosing greener home building materials and household products,
- Reducing waste from home construction and household activities and increasing recycling,
- Protecting your health from environmental hazards that occur in homes.

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