



FACULTY OF ENGINEERING

Department of INTERIOR DESIGN

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INDS 414 SUSTAINABILITY and the INTERIOR ENVIRONMENT

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MSc in Sustainable Building Technology

Green Interior Design

What is The Green and Green Building

Green

The term “green” refers to environmentally friendly practices from building design to the landscaping choices. It also encompasses energy use, water use, and storm water and wastewater reuse.

Green Building

The terms “green” and “green building” apply not just to products, but to construction strategies, building design and orientation, landscaping, building operations, maintenance, and more..

The Green Building or Green Architecture is not a new concept; if we catch a sight to the other creatures such as insects , birds and mammals; we can notice that they apply the concept of Green Architecture in their homes.



- Such as Spider which have special skills in being able to weave deftly threaded a geometric manner; and in various forms commensurate with the nature of the place.



- Bees prefer to take their homes in the mountains and the trees ; moreover, their houses had very precision and perfection design using hexagonal shape.

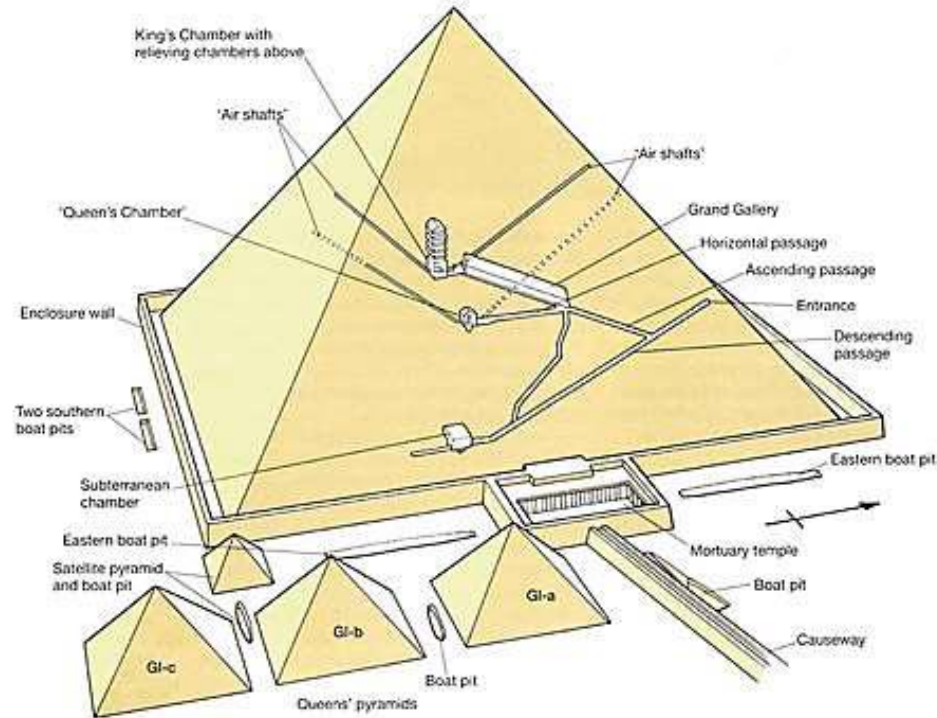


Not only creatures adapted the green building concepts; if we take a look to human history with architecture and buildings, we can find clear examples of and respect for the environment and homogenize them



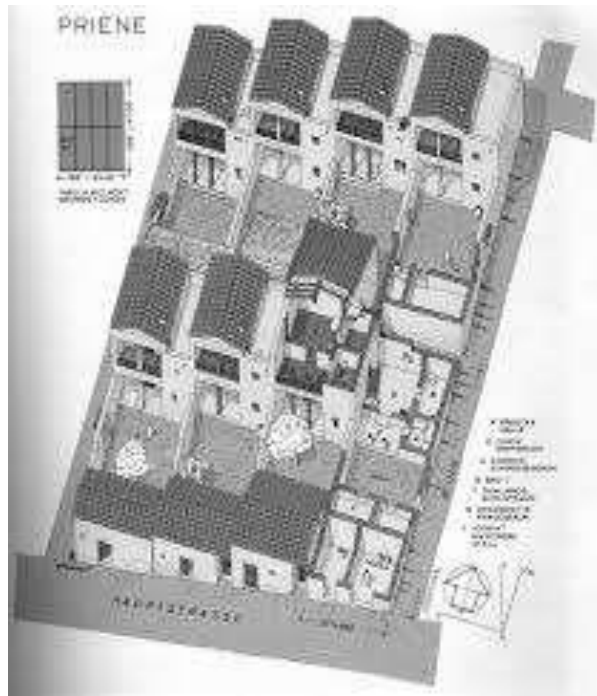
Pharaonic Egypt

- Pyramids are built on rock formations, conglomerate, gravel, or sand surfaces.



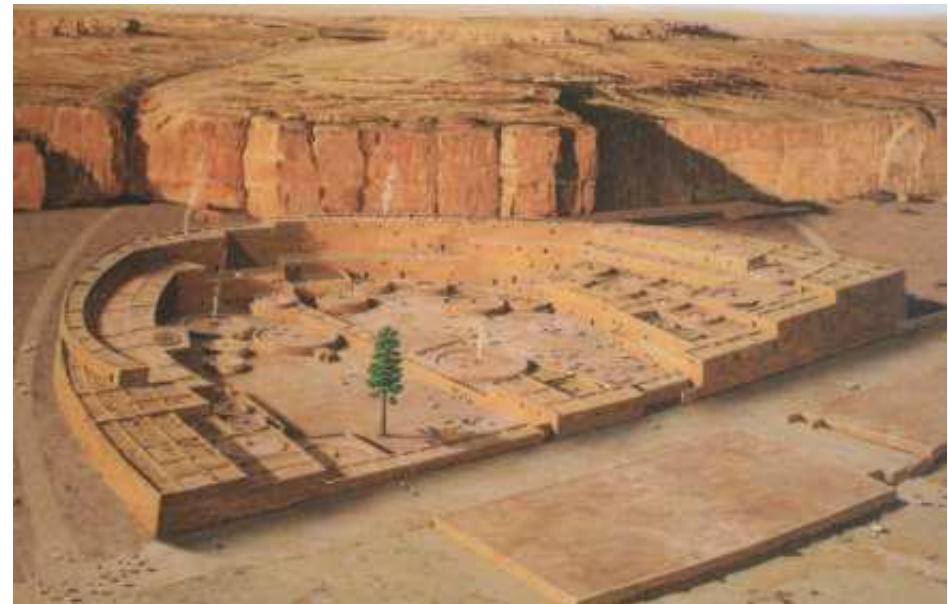
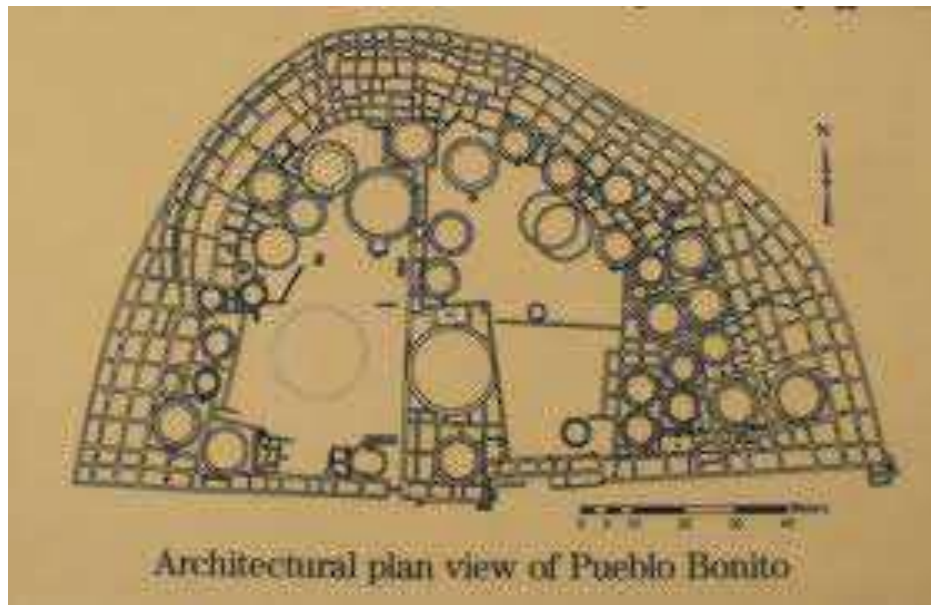
Ancient Greek

- The ancient Greeks, they took care to take advantage of solar radiation for heating for buildings, for example, they planned city Olynthus, where the streets allows direct reception equal to the sun



Pueblo Bonito

- Now known as New Mexico which built by the Anasazi Indians, the city which had a semicircular shape ;in the form of strips oriented manner that takes into account the angles of the sun in summer and winter.



After the first energy crisis, we found that there were many concepts advocated by reference to so-called **green architecture** and the most two famous architects in 20th century who adapted this concept in them design are:

Frank Lloyd Wright

“A building should appear to grow easily from its site and be shaped to harmonize with its surroundings if Nature is manifest there.”



Hassan Fathy

“look under your feet and build”





Green Building Concepts

Green Building Concept

The 'GREEN BUILDING' concept is to ensure waste is minimized at every stage during the construction and operation of the building.

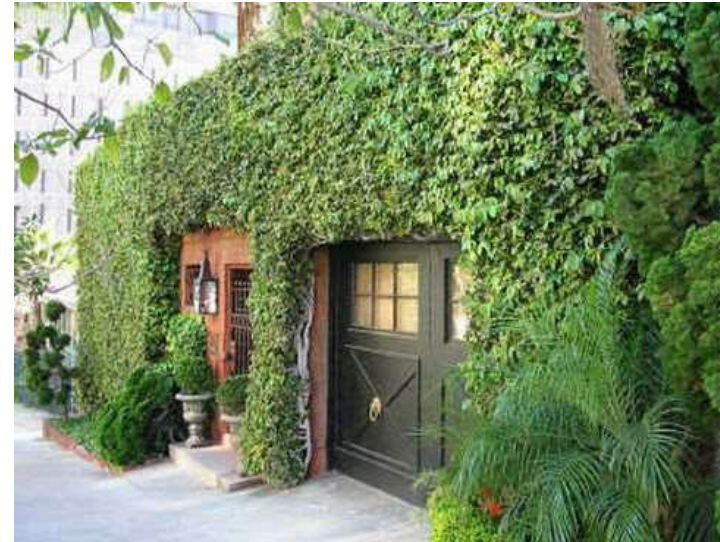


So What's the Concept of Green Interior Design?



Green Interior concepts are used:

- To root the relationship between interior and exterior, and the surrounding green environment.
- To return to aesthetics and concepts of interior design, in tandem with nature and social cultural values.
- Use building materials with natural property.







Green Building with Heartland Builders, LLC.

www.heartlandbuilders.com

Exposure to the sun Consider your homes orientation to the sun to harness energy or to shield it from heat and UV light

Other Considerations – Low VOC paints, “green” flooring, energy efficient lighting. Conduct a “blower door” test on your home to determine performance.

Insulation Air sealing a home, using a blown insulation and minimizing thermal bridging lowers utility bills. Consider SIPS or ICF's

High Efficiency Low E insulated glass windows reduce energy use and protect your homes interior

Recycled Deck Materials utilize sustainable resources and reduce maintenance costs

Rain Gardens Help reduce storm water run off

Recycled Framing Materials such as finger jointed studs and an I joist floor system help reduce new lumber use

Native Landscaping Requires less maintenance and irrigation

Conserve Water with duo-flush toilets, water saving faucets and rain sensors for lawn sprinkling

Insulated Foundation Walls Improves the comfort of your home and reduces utility costs. Consider ICF's.

High Efficiency Mechanical Systems reduce your energy bills. Consider a Geothermal Heating System. Always seal your duct work.

Energy Efficient Appliances reduce utility costs

Insulated Basement Floors helps eliminate dampness and reduces utility costs



Green buildings are designed in such a way to reduce overall impact on environment and human health by:

- i. Reducing trash, pollution and degradation of environment.
- ii. Efficiently using energy, water and other resources.
- iii. Protecting occupant health and improving productivity.

Benefits of Green Building

With new technologies constantly being developed to complement current practices in creating greener structures, the benefits of green building can range from **environmental to economic to social**. By adopting greener practices, we can take maximum advantage of environmental and economic performance. Green construction methods when integrated while design and construction provide most significant benefits. Benefits of green building include:

1- Environmental Benefits:

- Reduce wastage of water
- Conserve natural resources
- Improve air and water quality
- Protect biodiversity and ecosystems

2- Economic Benefits:

- Reduce operating costs
- Improve occupant productivity
- Create market for green product and services

3- Social Benefits:

- Improve quality of life
- Minimize strain on local infrastructure
- Improve occupant health and comfort

GREEN MOVEMENT

Better Health

Increase Productivity

Gain knowledge

Increase Property Value

Save energy

Aesthetically Pleasing

THINK green, **LIVE** green.

