INTERIOR DESIGN

WOOD AS A SUSTAINABLE BUILDING MATERIAL

We will focus on wood in general.

Wood is considered a sustainable building material because it is derived from a renewable sources and it has a low embodied energy.

This reflects the minimal non-renewable energy used in the production of timber and in its application in construction.

FEATURES OF WOOD THAT MAKES IT SUSTAINABLE

Indoor Air Quality

Wood does not emit toxic vapours. It is ideal where occupants or visitors have environmental sensitiveness.

Locally produced material

They suite local aesthetics and they tend to be more durable in the local climate. Choosing local materials supports local economies and reduces the enviromental impacts on transportation
Buildings must provide for adequate level of sound insulation. Designers incorporate wood in their designs because it reflects and absorbs sound waves to control and insulate sound from many sources.

Curved acoustical reflectors direct and diffuse sound to the seating area of the auditorium.
Durability

Wood is significant in savings in terms of reduced cost maintenance and repairs later in a building's life.

Wood has some degree of fire resistant and stability

Wood is significantly less heat conductive than steel and concrete.

Heavy timber have a particular advantage in a fire because they char on the outside while retaining strength, slowing combustion and allowing time to evacuate the building.

Trees are Naturally Pre-Stressed
Wind Loads Strengthen Outermost Fiber

Round Timber is 50% Stronger than Milled Lumber in Compression and Bending

The largest timber (A) that can be milled from a given log (B) will be only 17-33% of the strength of the log.
Can be recycled, reused and reproduced

Wood can be reused after the end of its service life. This reduce landfill waste, energy consumption and green house gases. Planting of forest also generates timber.

Passive design and framing

Wood minimises energy consumption and improves thermal comfort since they are poor conductors of heat.

A wood finish building is not as noisy as a complete steel or concrete finish building.

This is also an aesthetic characteristic of wood.

Support

Wood can be used for stability purposes in beams and in columns as they don't require reinforcement.
APPLICATION OF WOOD AS A BUILDING MATERIAL

Wood in Interior Design
When considered over a buildings lifetime, from harvest of raw material through manufacturing, transportation, installation, use, maintenance and disporal or recycling, wood performs better than concrete and steel interms of embodied energy, air and water pollution, carbon footprint and global worming portential.
Wood in Bridge Architecture

Wood Bridge In Netherlands

Footbridge Cafe in Amsterdam, Netherlands