Centre for Sustainability of the Built Environment

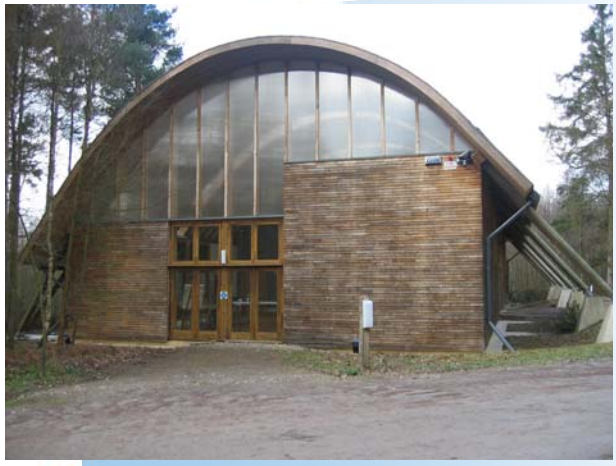
University of Brighton

UNIVERSITÉ DE ROUEN

Sustainable Timber

Sweet Chestnut Coppice

Timber can be considered as the most sustainable building material. It is a relatively quick growing, easily managed source of material that acts as a carbon sink during its growth. At the end of its useful life it can often be re-used or recycled, burned as fuel or allowed to biodegrade without harmful impacts on the environment. Modern technology and forestry techniques expand the opportunities for the use of timber through laminating and jointing sections of timber which would formerly have been waste making structural components and cladding materials.

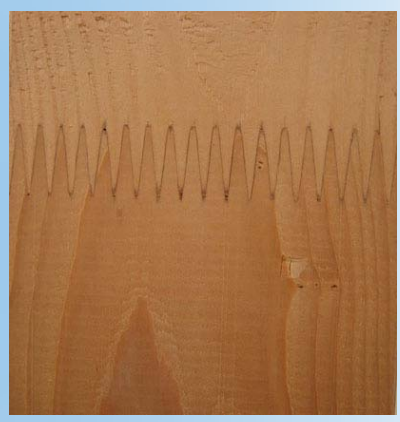


Embodied Energy

The embodied energy of a building is the energy consumed in order to produce the building ready for occupation. It includes the energy consumed to win the raw materials, to process those materials into building materials and components, to transport the materials between and within each of those processes and to constructed the finished building.

As buildings become better insulated and have improved energy efficiency in operation so the significance of the embodied energy to the total life-cycle energy consumption increases. There are clear advantages in terms of embodied energy in using local materials that use little processing energy such as timber.

The calculation of embodied energy is in its infancy and there are no commonly agreed standards by which it is determined. As a consequence published figures vary enormously and rarely provide indication of what has been included or excluded from the calculation. True embodied energy figures are rarely available but current research will establish figures for local products, quantifying the advantages of local practices.



Sussex Sweet Chestnut

Improved forest management and advances in technology reduce the embodied energy for such products as laminated structural beams:

•Coppice Management	Less wastage in the forest
•Local Timber	Minimum transportation
•Saw mill technology	Green timber no energy for drying
	Less wastage during production

CIBSE

durabuild

www.durabuild.org