are not aware of the implications beyond cost and specific performance criteria of choosing one material over another. To be sure, site designers have fewer materials to choose from than do architects, but their awareness of the characteristics of site materials is just as important. As a matter of practice, materials should be selected in part because of their durability. The process of manufacturing materials is energy and material intensive, and durable materials usually require less maintenance over a longer service life. Materials that require less maintenance or whose maintenance has a lower environmental impact are also preferred. Materials that are heavily processed or manufactured have a higher *embodied energy*—that is, there are greater energy inputs required to manufacture the product. Locally produced products require less transportation energy and produce less pollution. Designers should seek a durable, locally produced, low-maintenance product with a low embodied energy. For example, local hardwoods are preferable to tropical woods, and local stone to imported stone.

The best choice for materials may be recycled materials. Using recycled materials reduces solid waste, reduces the energy needed for manufacturing, and reduces the impact on natural resources. Using fly ash in concrete, recycled plastic in site furniture, and ground tires in pavement are all possible ways of incorporating recycled materials in site work. Use of materials, such as pressure-treated lumber that contain toxins should be avoided by specifying alternatives such as recycled plastic lumber.

Determining whether a building material is green involves the consideration of the entire life cycle of the material: the manufacture of the material, the impacts of its use, its distribution and service life, and finally its disposal. Every stage of the material's life involves energy use and environmental impacts. There are a variety of different life cycle assessment techniques, including the Building for Economic and Environmental Sustainability (BEES) model developed by the National Institute of Standards and Technology (NIST) with support from the Environmental Protection Agency (EPA) and the Department of Housing and Urban Development (HUD). The BEES model considers 10 potential environmental impacts of building materials:

1. Global warming
2. Acidification
3. Eutrophication
4. Natural resource depletion
5. Indoor air quality
6. Solid waste
7. Smog
8. Ecological toxicity
9. Human toxicity
10. Ozone depletion