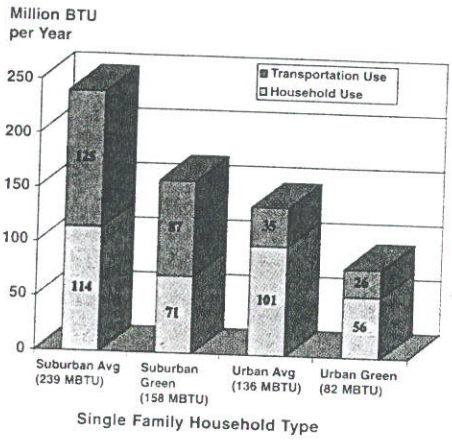
1. Select Environmentally Responsible Site

Environmentally responsible development begins by choosing the right place to build and only then proceeds by being thoughtful about how we build. Of all of the aspects of development no single act has a greater positive or negative impact on the environment, on community and on the quality of residents' lives than the location of a project. And, of all the locational issues, we think that to moderate our carbon outputs, selecting locations that reduce the use of the automobile is most important.

The BTU chart tells the whole story. A normal single-family house in the suburbs consumes 114 million btus (mbtu) of power for the house, but 125 mbtu for the transportation to get to and from the house, for a total of 239 mbtus. If you build a green suburban house, and make the house and car energy efficient, you can reduce the household's energy consumption by perhaps 30%, but the house and its transportation burden still consumes 156 mbtus.

Now let's look at a normal, non-green urban house – the same size as the suburban with the same amenities. Simply because of its location, the house and transportation budget combined is reduced to 136 mbtus, which is significantly less than the green suburban project. The transportation budget assumes most trips are done by walking, bus or transit, but does include some car driving, and provides for a car trip to go to the country, skiing or hiking on the weekends. Finally, if you make the urban house green, and replace the normal car with a hybrid car, the total energy budget goes down to 82 mbtus, only 36% of the standard suburban household's energy use. The point is clear – urban infill development



consumes about half the energy of greenfield development and is thus more environmentally responsible. Even better are design green infill houses, but location makes a huge difference on energy consumption.

The site selection process also needs to consider whether it is more environmentally responsible to develop land that has been previously developed (e.g. infill sites) or whether greenfield development, which frankly is often easier, is an acceptable choice. We believe that redeveloping existing sites, particularly ones near transit, or in walkable locations, should be a priority of green development. Simply put, greenfield development exacerbates sprawl and adds greenhouse gases to our atmosphere.

Now, not every project is going to be in an ideal transit accessible location, and it is quite difficult for most of us to manage without a car (or two). Realistically then, we need a development site selection system that guides us to locations that support a reduced use of the automobile. Mixing uses in a project also produces fewer auto trips. And when we do develop in suburban locations, higher density helps reduce impacts on the land.

Is there enough infill land for our current growth needs? In addition to infill lots and abandoned residential and commercial buildings sites which



Eaton Row Houses, New Haven, CT

What might a green urban infill house look like? Working with architect, Steven Winter Associates, Inc., we set out to design a street of affordable, for-sale green homes on a brownfield site in the inner city of New Haven. The homes complete a Hope 6 project located between the Yale University campus and the Biotech Science Park. These homes will sell for $95,000 to $139,000 and are affordable to families earning between $31,689 to $43,884 and primarily serve first time home buyers. The three and four bedroom homes have many green features that have lower environmental and economic impact. For example, it costs $1,500 a year to heat a typical New Haven house. A similar sized home at Eaton Row will only cost $600 a year to heat, and the homeowner can most likely walk to work, significantly reducing transportation expenses.

"I once wanted to become an atheist but I gave up... They have no holidays."
Henny Youngman