



ECOBROKER International

Green Topic Pages

Building Materials

Technology Snapshot & Benefits:

You can save a lot of money and avoid future headaches by choosing and installing building materials that are safe and appropriate. There is no specific cookbook path to success with building materials. However, your decisions may be usefully guided by asking the following questions:

- How well do the alternatives stack up in terms of performance? How well do they do the job for which they are intended? [Recall the sort of discussion found in the roofing industry about sheathing materials the lower cost of particle-board vs. the superior nail-holding ability of more costly plywood]
- What unexpected result might occur from each alternative building material? Consider safety issues such as off-gassing of glues from composite building materials and potential radon-emissions of some rock- or earth-based materials.
- What toxic effects might be associated with each alternative? Remember that lead in paint was great as an inhibitor of mildew (before its use was banned), but also that lead is linked with blood and bone cancers and other maladies and that a primary exposure pathway to humans was via lead in paint.
- What waste streams are associated with the manufacture of alternative building materials?
- How recyclable will the material be at the end of its useful life? For example, steel or tin (terne) roofing may be easily recycled into other uses, while asphalt shingles are usually landfilled because recycling is difficult.

To the maximum extent possible, you should think through design options and be mindful of potential consequences (both good and bad) of the choices that you make with building materials.

Estimated Cost Savings:

The framework that you use to evaluate costs and benefits is very important. Generally, the building trades focus on initial cost, but increasingly groups (like the American Institute of Architects) promote broader and more systematic thinking about true life-cycle costs and benefits.

For new construction, your architect or builder may have information that will be useful to you. In fact, you will be able to tell a lot about a builder by how he or she responds to questions like those presented above. For existing buildings, you may be much more in control over the choice of building materials.

Issues:

A plan will help you with decisions. Many builders and some architects remain generally uninformed about choices that are available. Suggest that your builder visit the websites and other resources that you suggest. Discuss findings and options before committing money to a design or an approach.

Regional Issues:

Building materials vary regionally. For example, slate roofing may make a lot of sense within several hundred miles of a quarry, but less so at great distances. Terra-cotta roofing makes sense in the Southwest and South, but may present issues with repeated freezing and thawing cycles experienced in the wetter North and Northeast.

Be mindful of building materials that are appropriate to your region of the country.

Installation (Getting It Done):

Be sure to consult with two, three or more builders, architects or suppliers. Multiple bids will allow you to gain immediate perspective of options and the true costs and value of various building materials in your area.