

# RECYCLED BUILDING MATERIALS

A better approach is needed to reduce the volume of building materials which is sent to landfill as waste. Re-cycling of suitable building materials is an essential part of ecological sustainability.

All building materials can be recycled (even concrete), but some are easier to re-use than others, eg.

- Bricks for example are difficult to recycle if they are set in hard mortar, so using weaker mortar is preferred
- Reversible jointing methods are preferred in framing systems, eg bolted or screwed connections rather than welded joints in steel
- Copper and aluminium may have a high embodied energy content as new materials, but they are still suitable for recycling
- Composite materials are generally more difficult to recycle, eg coated materials, laminates, etc
- Some materials, like timber, are easily re-constituted into wood products: other materials require more energy inputs to be recycled
- The durability of some materials enables them to be re-used several times, and the life of all materials can be extended if they properly protected and maintained while in use
- Some materials are difficult to recycle as building materials. Other materials may outlast the life of the building
- Lightweight framed structures are the most suited for de-construction, re-use and total re-location

Construction methods which are selected at the design stage will often dictate the ease or difficulty of de-construction and the percentage of re-usable materials salvaged from a defunct building.

So building designers have a responsibility to specify preferred materials and methods of construction which are suited to recycling. Building contractors need to exercise care during demolition, and should be prepared to re-use suitable materials on projects. Owners should insist on the use of recycled materials ... in the interest of ecologically sustainable development.

Jack Metcalf, building consultant ... [www.imetcalf.net](http://www.imetcalf.net)

PS. See the 'Owner Builder' bi-monthly mag for some radical recycling ideas