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# ABOUT MESH TUBE WALLS AND ROOFS

A.K.A. HYPER-WATTLE, TRASH WATTLE    BUILD SIMPLE INC., [www.BuildSimple.org](http://www.BuildSimple.org)

Below: When natural fiber tubes are soaked with clay they stiffen up.



Below: Natural fiber tubes can even be built in Nubian style vaults, but waterproofing must be perfect!



This 1.m (5') span vault held up 907 kg (2000 lb) without collapse. Testing is planned to use Grancrete on thin fabric to waterproof. Natural fiber tube roofing may never be appropriate for humid areas because of termites.

Below: Urban areas have more trash than straw and clay. Mesh tubes packed well with plastic trash become firm. Trash will not be damaged by termites, and should survive soaking in floods.



Recycled mesh tubes can be finished with cement stucco. Foam trash works very well, but film and soft plastics can be used to fill around hard plastic containers to make an even tube.



Recycled tube walls are stiffened by sewing the overlapping corners. But they will need vertical rebar to strengthen the wall, since the cement does not soak through all the filling like clay does in natural fiber tube walls.

Below: Foam-filled tubes are light to handle. They can be used for a small vault without rebar, if carefully filled. This roof vault filled with strong packing foam needed a light form while it was stuccoed, but now spans 8'10" without any steel.



The edge of the vault still needs a finish coat of stucco. It will be tested in November for compressive strength.

More information about mesh tube walls online at [www.BuildSimple.org](http://www.BuildSimple.org) or email [simple\\_earth@yahoo.com](mailto:simple_earth@yahoo.com).