Pros and Cons for Building an Earthship House

Today, most people in the United States are accustomed to living in homes that have a squarish or rectangular shape. While you may not realize it, this is the least efficient shape to use if you are seeking to work with a wide range of materials, durability, and also reduce energy consumption.

In general, the rounder the shape, the better chance you have of building a durable structure with limited materials.

From that perspective, Earthship houses have a great deal to offer to anyone thinking about building an off-grid or survival home. Even if you do not utilize this specific design, you can learn more about how it works, and then take the best ideas and adapt them to your needs.

What is an Earthship House?

The Earthship building design is a trademark of architect Mike Reynolds. These homes can be built from all kinds of scrap materials. The rooms, walls, and internal plumbing are all arranged to take advantage of passive solar heating and cooling.

Aside from accounting for natural wind, sun, and other features, these homes also make use of materials that multiply the effects of natural elements to achieve a range of goals. For example, instead of using wood or plaster walls, these homes might use tin cans combined with cement. The tin cans in turn, absorb heat from the sun and then radiate it inward via vents placed in the upper portions of the wall.

An Earthship house is also designed to be completely independent from the standpoint of energy, food production, and waste removal. The building plans integrate solar power,

greenhouses, composting, and human waste disposal systems. Windmills and water based power systems are also fairly easy to integrate into the power system.

Advantages

The biggest benefit you will get from using an Earthship design revolves around the fact that these buildings are being successfully deployed in every area of the world. There are several fully operational models in ground zero of the earthquake in Haiti as well as other disaster areas. They have also been built in hot climates, cold ones, wet, dry, and just about every other place you can imagine.

Even though modern architects do not say much about this design, there is plenty of advice available from the founding architect as well as homeowners that have built Earthships on their own. Therefore, even if you run into problems, chances are someone else has grappled with the same issue and come up with a solution that can be duplicated.

Unlike many other structures designed for survival or environmental conservation, most everything used in building an Earthship home comes from the junk yard. You will only need a few wooden beams, and then fill in the walls with mud, cement, old tires and tin cans.

The entire structure is designed to be heated and cooled without using conventional heating systems, which will reduce energy costs to low or non-existent. Interestingly enough, as

time goes by, the structure will actually become more efficient and provide more stable temperatures.

Disadvantages

When you first look at pictures of Earthship homes, they may not seem that complicated or expensive to build. Among other things, aluminum cans and old tires can be saved up or bought for a very low price. Cement and wood can also be purchased and set aside for years if that is what it takes to build up enough materials to build up a decent sized structure.

Most people that built Earthship homes were surprised to find that it cost between $100,000 and $150,000 from start to finish.

There is no question that Earthship designs are ideal when it comes to saving energy and money. Unfortunately, they may not be ideal for survival situations in which contaminated air play a major role in the crisis.

This includes nuclear and biowarfare attacks as well as volcanic explosions that release millions of pounds of very fine ash into the air. Unfortunately, even if you use air filters on incoming air vents, it will impede air flow, which will make it much harder and more expensive to achieve passive heating and cooling.

Alternatives

If you are going to spend over $100,000 on a survival home that you will most likely build yourself, it does not make sense to overlook anything that might interfere with your long term survival.

In severe cases, animals may not be able to graze, water tables will be severely polluted, and even the air itself may contain toxins that will kill or disable everyone exposed to them. **Geodesic biodomes** may be a bit harder to build, however

they can offer 100% independence.

Another alternative to Earthships revolves around building underground. You can build homes in caves, abandoned missile silos, old mines, and just about any other place where you can safely get several feet underground and create a living space for humans, animals, and plants. Perhaps it can even be said that any land purchases for survival needs should include some feature that can be easily turned into a complete underground living facility.

Earthship home designs offer many things to consider for those who want a comfortable home that will withstand a wide range of disaster scenarios. At this time, materials for building these homes are plentiful, and there is plenty of information available to help you overcome a range of problems.

On the other hand, it should be noted that some additional modifications may be needed for extreme survival situations. By the time you make these modifications, you may find that underground or geodesic biodomes will offer better value for your money and more durability than expected.

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