

THE FIRST ECO-VILLAGE BUILT WITH HEMPCRETE IN AUSTRALIA

On September 2018 the first [DecoHousing eco-village which utilizes hempcrete](#) in all its 12 houses opened in the town of Denmark, in Western Australia.

The project started in 2013 and has been developed by the DecoHousing Denmark Group, a new society composed by the 12 families of owners/builders, in partnership with architects, planners, environmental scientists, earthmovers and other professionals.

In addition to creating a model of co-housing for rural areas with a sustainability approach, the project intended to demonstrate hempcrete as a superior building material. Hempcrete is a combination of hemp aggregate, water and a lime-based binder. The material is very insulating, resistant to fire and even able to sequester carbon dioxide for the lifetime of the building. The walls are highly insulating, they protect the timber thanks to the lime, they don't get eaten by white ants, they don't burn and it's an acoustic material. The material is also very resistant to heat. Directing a blowtorch onto this material heat isn't transferred and it doesn't burn. The houses are very well sealed, so you don't get intrusion of embers into the structure.

The materials for the DecoHousing village are imported but the promoters believe the Western Australia could supply its own hemp in the future, implementing a national fully-integrated hemp industry.

In this perspective, the project has already generated important results, arousing the interest of other communities to build with hemp. Hempcrete houses are being constructed all over the south west of Western Australia, and many builders are taking inspiration from the project in Denmark. The DecoHousing Denmark Group has been supporting these projects providing technical assistance. Moreover, the government of [Western Australia is providing funds](#) to support a state's hemp industry.

The key feature of the houses built by the DecoHousing project is the combination of hemp hurd, the innards of the plant's stem, and lime, which is used to render the traditional timber frames. This material forms a masonry product which is very thermally efficient, breathes and has lots of acoustic properties. It provides a wall which is much more thermally efficient than a double brick wall and is equal in effect to the thermal efficiency of a very insulated



timber wall. But this wall breathes, which regulates the humidity in the house.

While the hempcrete was a major performance feature of the DecoHousing project, the buildings featured other leading technologies to form a highly sustainable residence:

- The entire village block is passive solar in design, using the sun's energy for heating and cooling.
- The windows are uPVC double glazed, making them energy efficient, sound insulating and heat resistant.
- The village banks its rainwater that comes back reticulated to the houses.
- The village have a single Solar PV system with battery storage which is one of the most advanced technical solar systems in Western Australia at the moment.
- A beautifully village are being designed by the community and bicycles are a popular mode of transport for residents.

The project is still not complete and the DecoHousing Group, coordinated by the Manager Paul Llewellyn, is working to create a grey water recycling system, productive gardens and other initiatives aimed at creating a beautiful landscape.

The Denmark Deco-Village is a member of the [Global Ecovillage Network](#), a global association of people and communities dedicated to living *sustainable plus lives* by restoring the land and adding to the environment more than is taken.

To know more

[Denmark Eco-Village website](#)

[Denmark Deco-Village Press review](#)

[Denmark Deco-Village Photos](#)

[Article in decohousing denmark](#)

[Article in gsweekender.com.au](#)

[Article in Hemptechglobal.com](#)

[Article in Hemptoday.net](#)

[Article in abc.net.au](#)

[Article in abc.net.au](#)

[Hemptoday.net website](#)

[Building with Hemp in Mirreco.com](#)

[Article in Hemptoday.net](#)

[Building with Hemp in cnbc.com](#)

