

Swansea company builds homes from recycled plastic

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The house is made from recycled waste plastic and minerals

A company is building homes made from 18 tonnes of recycled waste plastic.

Affresol, of Swansea, has developed technology to build low carbon houses from the plastic and minerals.

The firm, backed by Welsh Assembly Government money, has launched a range of eco-friendly homes and four-tonne modular portable buildings.

Economy Minister Ieuan Wyn Jones said the "new sustainable process" had exciting potential for construction and for "green jobs".

The company claimed that eco-friendly homes like the show home at its factory on Swansea West industrial park could revolutionise the building industry.

The company also makes modular portable buildings made up of four tonnes of recycled waste.

Affresol developed a new material called Thermo Poly Rock (TPR) from recycled plastics and minerals for use as a structural building product.

The company claims a patented low energy cold process converts the plastics into a very strong structural element.

The TPR panels are bolted together to form the load bearing frame of the house which can be externally clad with brick, block or stone, with the interior insulated and plastered as any other house. The roof is tiled from recycled materials.



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Ian McPherson, Affresol

Affresol managing director Ian McPherson said TPR was stronger and lighter than concrete, waterproof, fire retardant, did not rot and had excellent insulation properties.

The company estimated the life of the houses at more than 60 years and said the TPR elements were recyclable at the end of that period.

The company has spent the past two years working with Cardiff and Glamorgan universities, the Building Research Establishment (BRE) and the Carbon Trust developing the product.

Its been supported through development by the assembly government's single investment fund, and Finance Wales, a provider of commercial funding to businesses in Wales and a subsidiary company of the assembly government, also provided investment.

Mr McPherson said the buildings had huge potential for use across the world.

He said: "Every country in the world has issues with waste and we now have an opportunity to turn waste into an enduring housing resource that is 100% recyclable."

“ It is precisely the kind of business we aim to promote... designed to ensure the Welsh economy is fit for the future and ready to compete in high value markets ”

Economy Minister Ieuan Wyn Jones

Mr Jones said: "It is precisely the kind of business we aim to promote as part of our economic renewal programme - which is designed to ensure the Welsh economy is fit for

the future and ready to compete in high value markets."

This week domestic heating and water system company Worcester Bosch ordered the first modular building from Affresol for its Worcestershire plant.

Worcester Bosch said supplying Affresol with plastic from recycled boilers would enable it to achieve a zero waste policy.

Affresol employs seven people but said it hopes to treble this number in a year.

It is awaiting BRE accreditation before building 19 homes in Merthyr as its pilot project.