The Danish company Continuum Group ApS with its subsidiary companies in Denmark (Continuum Aps) and the UK (Continuum Composite Transformation (UK) Limited) wants to give end-of-life wind blades and composites a new purpose, preventing them going to waste. The goal is to reduce the amounts of CO_2 emitted to the atmosphere by the current waste streams, delivering a value to Europe's Net Zero efforts.

Continuum states that it ensures all wind turbine blades are 100% recyclable and plans to build industrial scale recycling factories across Europe.

Net zero is the phrase on everyone's lips, and as 2030 rapidly approaches we constantly hear updates about wind energy generating renewable energy that powers millions of European homes – but what happens when those turbine blades reach the end of their lifespan?

© Continuum

Currently the general answer is to put them into landfill or co-process them into cement, but neither is planet friendly. Many countries in Europe look to ban landfill from 2025, so this option is likely to be elimi-

nated in the near future.

Photo unsplash

Continuum provides an alternative: When the end of their first life arrives, Continuum recycles them into new, high performing composite panels for the construction, and related industries. The vision of the Danes: Abandon the current landfilling, and drastically reduce CO_2 emitted during currently applied incineration & co-processing in cement factories by 100 million tons by 2050, via their mechanical composite recycling technology and their industrial scale factories.

The technology is proven, patented, and ready to go, says Reinhard Kessing, co-founder and CTO of Continuum Group ApS, who has spent more than 20 years of research and development in this field, and advanced the reclamation of raw materials from wind blades and other composite products and transformation of these materials into new, high performing panel products.

By working with partners, Continuum's cost-effective solution covers end-to-end logistics and processes. This spans from the collection of the end-of-life blades through to the reclamation of the pure clean raw materials and then the remanufacturing of all those materials into high value, highly performing, infinitely recyclable composite panels for the construction industry or the manufacture of many day-to-day products such as facades, industrial doors, and kitchen countertops. The panels are 92% recycled blade material and are said to outperform competing products.

Photo Pixabay

Nicolas Derrien: Chief Executive Officer of Continuum Group ApS said: "We need solutions for the disposal of wind turbine blades in an environmentally friendly manner, we need it now, and we need it fast, and this is where Continuum comes in! As a society we are rightly focussed on renewable energy production, however the subject of what to do with wind turbine blades in the aftermath of that production has not been effectively addressed. We're changing that, offering a recycling solution for the blades and a construction product that will outperform most other existing construction materials and be infinitely recyclable, and with the lowest carbon footprint in its class."

Photo unsplash

Martin Dronfield, Chief Commercial Officer of Continuum Group ApS and Managing Director of Continuum Composite Transformation (UK) Ltd, adds: “We need wind energy operators & developers across Europe to take a step back and work with us to solve the bigger picture challenge. Continuum is offering them a service which won’t just give their business complete and sustainable circularity to their operations but help protect the planet in the process.“

Each Continuum factory in Europe will have the capacity to recycle a minimum of 36,000 tons of end-of-life turbine blades per year and feed the high value infinitely recyclable product back into the circular economy by 2024/25.

Due to an investment by Climentum Capital and a grant from the UK’s ‘Offshore Wind Growth Partnership’, Continuum are planning for the first of six factories in Esbjerg to be operational by the end of 2024 and for a second factory in the United Kingdom to follow on just behind it. After that they are looking to build another four in France, Germany, Spain, and Turkey by 2030.

As part of their own pledge to promote green behaviour, Continuum have designed their factories to be powered by only 100% green energy and to be zero carbon emitting environments; meaning no emissions to air, no waste fluids to ground, and no carbon fuel combustion.

Source: Continuum / Textination