

Incredible Husk: Transforming Waste into Sustainable Construction Materials.



- **400 Million tonnes of materials are used**
- **100 million tonnes of waste is produced more than 1/3 of the UK's annual waste.**
- **25 Million tonnes of construction waste is disposed to landfill.**

These factors collectively make it a compelling strategy for a more sustainable and resilient built environment. cost savings and job creation, and promote resource efficiency. These factors collectively make it a compelling strategy for a more sustainable and resilient built environment.

What are the current issues with existing construction materials and those currently existing in current building stock?

Current materials contain oil-based phenols and formaldehyde therefore laws and legislation around construction materials are rapidly changing and those working in the Built Environment need to keep up or ahead of those changes. In 2015 the ECC classified Formaldehyde as a carcinogen. Pressed wood products, composite engineered wood, insulating materials all contain formaldehydes.

As a member of the Agricycle Nexus Consortium; **CIRIA and BOS** experienced an eye opening day at the Incredible Husk Realisation event, where we witnessed the conversion of waste into Construction Materials using the Wilson System and non-synthetic binders. Imagine this: bio food waste, plastic bottles, cardboard, paper, and even metal bits all transformed using the Wilson System. Turning the biogenic content of municipal and commercial waste into biofuel and Wilson fibre. However this is just clean wastewhat can we then use this for and one of the reasons why CIRIA and BOS founding members of the Agricycle Nexus Consortium.

CIRIA and BOS have been driving activities aimed at reducing carbon emissions across the construction sector. By transforming farming and general domestic waste into construction materials this will decarbonise the built environment with a truly green solution.

There is an urgent call to action over climate change and the Construction Industry in the UK is the largest user of natural resources. [WRAP Data]

In Norway the Declaration on Nordic Carbon Neutrality and Circular Principles in the Construction Sector. January 2019 Outcome: 2023 – 45% new homes constructed using MMC Systems.

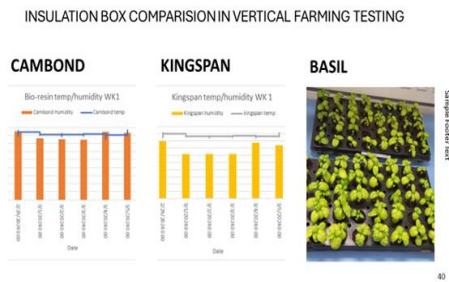


Image 2 Cambond Vs Kingspan 1

Meanwhile in the UK the Carbon Emissions Bill –Mandating declaration of whole life carbon for properties- Private members Bill 2nd reading postponed from October 2022 to February 23rd 2023 Outcome to date is still unknown.

Using waste materials in construction would contribute positively to environmental sustainability, mitigate climate change impacts, offer economic benefits through cost savings and job creation, and promote resource efficiency.





Sept 18 2024

At the Realisation Day, Dr Zhao, representing Cambond which is part of the Incredible Husk Group (CIRIA and BOS member) has created bio-adhesives meaning there is a patented formula to combine waste and create construction materials. This solution is already being utilised in Dareglobal Plywood. Cambond which is a member of the AgricycleNexus Consortia have 7 Patents granted and 10 pending in more than 4 countries.

Incredible Husk also unveiled their Din Certificate for the earthworm and planet biodegradable standard.

There will be an opportunity to hear our BOS Members, Dr Zhao & Keith Ridgeway participating in the BOS Offsite Summit on the 17th & 18th of September.

As a teaser an example of Insulation boards was presented at the realisation day. With a comparison of Cambond and Kingspan. The image below demonstrates the Insulation Box Comparison carried out to look at the thermal properties of Kingspan Vs Cambond. A picture paints a thousand words; summarising Cambond provides greater thermal properties and greater crop yields. **[See Image 2]**

Incredible Husk speeds up the revolution enabling agricultural to create construction materials through non-synthetic binders. This initiative is a crucial step towards decarbonising the built environment.

Additional Information

Join BOS at the Offsite Expo on the 18th September where we will be hosting a session on how Offsite can contribute to reducing carbon emissions globally. Materiality is the key to unlocking a greener and brighter future. [Offsite Expo | Offsite Summit | Buildoffsite](#)

Do you want a cleaner, greener future?

To find out more information about BOS and how you can become a member our next event is on the 18th of July.

Industry consultation on BOS Manifesto | Buildoffsite [#CollaboratingForImpact#greenbrighterfuture](#)

CIRIA and BOS founding members of the Agricycle Nexus Consortium, are facilitating the drive for reducing carbon emissions within the construction sector and sharing the possibilities of joining this transformative journey. The construction industry in the UK is a significant consumer of natural resources and a major waste producer, with substantial environmental impacts. Transforming waste into construction materials can significantly reduce this footprint.

Utilising waste materials in construction is not only environmentally sustainable but also offers economic benefits through cost savings and job creation. This strategy promotes resource efficiency and helps mitigate climate change impacts, making it a vital approach for achieving a more sustainable and resilient built environment.

Incredible Husk has successfully gathered key stakeholders from various sectors to drive transformative change in the construction industry. By partnering with organisations like CIRIA and BOS within the AgricycleNexus Consortium, they have created a collaborative platform that focuses on reducing carbon emissions and promoting sustainable practices. Their approach included;

Hosting events like the Realisation Day to showcase the conversion of waste into construction materials.

Innovative Partnerships: Incorporating innovators like Dr. Zhao from Cambond to introduce bio-adhesives that replace harmful substances in construction materials.

Aligning with Legislative Changes: Addressing regulatory shifts and the need for safer construction materials, positioning themselves as leaders in sustainable innovation. CBAM is hurtling towards the UK at an alarming speed this transformation is what is required to minimise associated penalties of the Carbon Border Adjustment Mechanism By fostering these collaborations and demonstrating the tangible benefits of their innovations.

Incredible Husk has positioned itself at the forefront of a movement to decarbonise the built environment and promote sustainable construction practices. cost savings and job creation, and promote resource efficiency. These factors collectively make it a compelling strategy for a more sustainable and resilient built environment.

