

# Biogenic Carbon

**The Challenge of Presenting the Benefit**

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# Aim

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What can we do now to present biogenic carbon benefit in a way that compliments existing norms and standards relating to whole life carbon (products & buildings) and green claims.



Norms & standards include RICS Whole Life Carbon Assessment, Energy Performance in Buildings Directive, LCA methodology (e.g. EN 15804:2012+A2), Green Claims Code, Part Z.



Carbon storage certification in the pipeline (CRCF Regulation) but up to 4 years before live in EU and longer for UK. Possible impact needs consideration.

# Biogenic Carbon Benefit

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- Biogenic carbon is the carbon removed from the atmosphere to form the chemical backbone of natural materials such as timber, straw, wool and hemp. Backbones such as cellulose, hemi-cellulose, lignin and keratin are composed of approx. 50% carbon which sequesters the equivalent of 1.8 kg of CO<sub>2</sub> for every kg of material until the carbon is oxidised or otherwise degraded.

- RICS WLCA PSv2 Appendix N3:

***‘Using biobased products in other long-life products within buildings provides a benefit because the biogenic carbon sequestered within them means that carbon is stored out of the atmosphere for a much longer period than if the biomass was used for energy or short-lived products like paper’***

## Difficulty in Presenting Biogenic Carbon Benefit

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In current LCA methodology biogenic carbon nets to zero over the life cycle of the product (A-C) meaning removals = emissions.

Focus on dealing with the +/- biogenic approach means discussions become increasingly granular and academic and less understandable.

Module D falls outside the product life cycle.

Attempts to valorise biogenic carbon in products adds another layer of complexity.

Target audience doesn't understand the issues and solutions seem far off.

# The Carbon Removals and Carbon Farming (CRCF) Regulation

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- Entry into force end of December 2024.
- Includes carbon storage activities that capture and store carbon in long-lasting products for at least 35 years
- Voluntary certification and EU register in place within 4 years.
- Undecided when and how third countries will be able to participate.
- Looks promising on the face of it (for the EU at least) but scratch beneath the surface.



# CRCF - Certification of Carbon Storage in Long-lasting Products

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## Four overarching criteria:

- ✓ **Must bring about a quantified net carbon removal benefit**
- ✓ **Must be additional, meaning that they go beyond statutory requirements at the level of an individual operator, and they need the incentive effect of the certification to become financially viable**
- ✓ **Must aim to ensure long-term storage of carbon while minimising the risk of carbon release**
- ✓ **Should do no significant harm to the environment and should be able to result in co-benefits to one or more sustainability goals**

## Needs:

- Third party verification - Robust transparent monitoring - Liability mechanisms for operators

# What Can be Done Now?

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- Work with the existing landscape.
- RICS PS v2 acknowledges biogenic carbon benefit.
- LULCF accounts sinks and sources.
- Carbon sinks are recognised and accounted for in national GHG inventories.
- Standards exist to determine carbon storage benefit and delayed emissions.
- It's a question of clear, credible, consistent and verifiable messaging.
- 'Additional Information' has more value than no information

## Green Claims Code

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### **Claims must:**

Be truthful and accurate

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Be clear and unambiguous

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Not omit or hide important information

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Only make fair and meaningful comparisons

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Consider the full life cycle of the product

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Be substantiated

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## What Can we say Without Being at Odds with Norms & Standards?

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- The following can be included as additional information and used to substantiate green claims at a product level and aggregate (building level):
- How much carbon a unit of product adds to/retains in the relevant carbon sink, e.g. the entirety of the verifiable biogenic carbon in a m<sup>3</sup> of sustainably sourced homegrown timber is added to the HWP carbon sink.
- What the effective GHG reduction the carbon addition has over the product life cycle based on verified biogenic carbon, service life and transparent delayed emissions calculation.
- The carbon footprint of the product in line with established methodology e.g. PAS 2050, ISO 13391?
- Module D impacts from verified EPD (outside the product life-cycle).

## In Short

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It is possible to present biogenic carbon benefit in alignment with existing standards & norms.

Short-term we need to develop and implement a consistent way to present this as 'Additional Information'.

Medium-term as certification schemes emerge things may change but many challenges on the way.

Need to make the case now. Voluntary 'Additional Information' is better than no information.

# Thank you

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