FMBusinessDaily

UKGBC: circularity essential in delivery of net zero buildings

3 years ago

The UK Green Building Council (UKGBC) has published new insight into the positive impact circular thinking can make on bringing whole-life carbon reductions and value creation across construction projects. The study, 'How Circular Economy Principles can impact carbon and value' seeks to increase understanding within the built environment sector of how circularity can support reductions in whole life carbon in achieving net zero. It also seeks to enable project decision-makers and key built environment stakeholders to strengthen the business case for implementing circularity.

The report claims to demonstrate that circularity has benefits beyond carbon reduction, but delivers against a much broader set of organisational, social, environmental, and financial aims. The research also offers a library of case studies which evidence the positive impact circularity is already delivering across new and existing projects within the UK:

- Through the smart application of circular economy practices, significant carbon reductions can be made across built environment projects.
- Projects across the UK are successfully re-using building materials such as steel and other building structures to save embodied carbon, whilst also reducing project costs.
- Greater consistency is urgently needed in the measurement and reporting of whole life carbon and circularity practices, to support the industry's transition to net zero.
- The benefits of circularity can extend beyond carbon, with a range of organisational, social, environmental, and financial value uplifts.

The global shortage and fluctuating costs of raw materials are increasingly driving the construction industry to explore opportunities to adopt circular thinking, including the re-use of materials and re-

purposing of existing building structures. Published in 2021, the Net Zero Whole Life Carbon Roadmap (The Roadmap) confirmed that a net zero carbon built environment is achievable by 2050 and highlighted the essential role the greater use of circular economy principles will play in reducing carbon.

A key conclusion of the report is that many new and existing building projects have already used circular economy principles and are able to set out the resulting carbon reductions. Most notable is the level of carbon savings occurring through the reuse of existing assets and materials. For example, the case studies illustrate how significant upfront embodied carbon savings are being delivered through the reuse of existing structures, facades and steel.

The research also claims to identify an important gap in industry knowledge when it comes to measuring and reporting the impact created through applying circularity. The research concludes that measurement is infrequent, inconsistent, and difficult due to the lack of a common set of metrics and methods to measure both the whole life carbon and circularity of projects. The research also suggests that many individuals and groups are working to improve clarity and consistency on these issues.

Image: Shutterstock