

Briefing: Regulate embodied carbon

October 2024

What is embodied carbon? Why should we regulate it?

Around 1 in 10 tonnes of the UK's total greenhouse gas emissions are 'embodied' carbon emissions related to the production and use of construction materials. This is more than the country's aviation and shipping emissions combined.

Yet there is no national UK policy or regulation to reduce these emissions, despite our climate legislation and support from the construction sector.

Mainly due to building improvements and grid decarbonisation, by 2035 embodied carbon will form over half of built environment emissions.

This is low-hanging fruit in the fight against climate breakdown. Action is urgent.

Other countries do regulate embodied carbon emissions including France, the Netherlands, Denmark, Norway, Sweden, Finland, and Switzerland. Assessment and disclosure of these emissions will be mandatory across the EU from 2028 for buildings >1000m², and all buildings by 2030. Member states must transpose these requirements into their own laws by May 2026 and publish roadmaps in 2027 which include the introduction and ratcheting down of limit values from 2030 onwards.

Industry support for regulation

- Over [200 industry organisations](#) are backing regulation including Barratt Developments, Sir Robert McAlpine, NatWest, Historic England, ABRDN Investment, the Royal Institute of Chartered Surveyors, and the Royal Institute of British Architects.
- Regulation would provide consistency, clarity and a level playing field across the construction industry. This would save time and money for developers and local authorities (many of which are already introducing comparable requirements) by standardising requirements and making reporting easier.
- Parts of UK industry are already starting to innovate in pursuit of low-carbon construction products, from steel and concrete to timber and biomaterials including through reducing waste, energy efficiency, and re-using materials.
- Regulation would provide the economic signal required by the entire construction industry to invest in decarbonising construction products, growing this market, bringing skilled jobs and bringing our construction industry in step with our neighbours. Increasing the demand for low-carbon products will help encourage innovation and reduce the costs of low-carbon materials, as innovators are able to scale up and reduce costs in response to the demand that will come from developers to buy such products.
- Regulating embodied carbon emissions will also encourage the purchase of materials produced in the UK, as much of the embodied carbon emissions from materials are from transport - half of the carbon emissions associated with timber comes from transporting it over long distances (e.g. from Scandinavia), typically by road.

Embodied carbon refers to the remaining 'emissions associated with materials and construction processes throughout the whole lifecycle of a building or infrastructure'. This is typically associated with any processes, materials or products used to construct, maintain, repair, refurbish and demolish a building.

Embodied carbon emissions total 64 million tonnes of CO₂ per year.

The regulation proposed

We're calling on the new Government to move to reduce embodied carbon emissions in building construction within two years of taking office, including within six months of taking office confirming these interventions and timeline to give industry the opportunity to prepare:

- By 2026: Mandate the measurement and reporting of whole-life carbon emissions for all projects with a gross internal area of more than 1000m² or that create more than 10 dwellings. This should include setting out parameters for what constitutes an acceptable calculation, so that developers can choose whichever measurement tool they prefer that meets those criteria.
- By 2028: Introduce legal limits on the upfront embodied carbon emissions of such projects, with a view to future revision and tightening as required.

Cross-party consensus

This is an issue which has support from across the political spectrum. Conservative MP Jerome Mayhew tabled a Private Members Bill on the issue in November 2022 which progressed to 2nd reading.

In May 2022, the Environmental Audit Committee released a report 'Building to net zero: costing carbon in construction' which found that current policy inadequately addresses the need to reduce embodied carbon, develop low-carbon materials, or prioritise reuse and retrofit.