

What are Carbon Emissions?

Carbon emissions refer to the release of carbon dioxide (CO₂) into the atmosphere as a result of human activities, such as burning fossil fuels (coal, oil, and natural gas) for energy, transportation, and industrial processes. These emissions are a significant contributor to the greenhouse effect, which traps heat in the Earth's atmosphere and leads to global warming.

In the UK, carbon emissions are a critical focus in the building and construction sectors, particularly in residential retrofit, home renovation, and extension projects. Reducing carbon emissions is essential for meeting the UK's legally binding target of achieving net-zero carbon emissions by 2050, as outlined in the Climate Change Act 2008.

Synonyms: Greenhouse gas emissions, CO₂ emissions

Practical Examples:

1. **Residential Retrofit:** Installing energy-efficient heating systems, such as heat pumps, to replace gas boilers reduces carbon emissions by decreasing reliance on fossil fuels.
2. **New Builds:** Incorporating renewable energy sources, such as solar panels, into new housing developments helps minimise carbon emissions.
3. **Building Regulations:** Part L of the UK Building Regulations (Conservation of Fuel and Power) sets standards for energy efficiency in buildings, directly impacting carbon emissions.

Related Terms:

1. **Net Zero:** Achieving a balance between the amount of greenhouse gases emitted and the amount removed from the atmosphere.
2. **Energy Performance Certificate (EPC):** A document that rates a building's energy efficiency and provides recommendations for improvement.
3. **Embodied Carbon:** The total carbon emissions associated with the construction and materials of a building.
4. **Passivhaus:** A rigorous energy efficiency standard for buildings that significantly reduces carbon emissions.
5. **Renewable Energy:** Energy derived from natural sources, such as solar, wind, and biomass, which produce minimal carbon emissions.