

# What is a Carbon Footprint?

**The carbon footprint refers to the total amount of greenhouse gases (GHGs), primarily carbon dioxide (CO<sub>2</sub>), emitted directly or indirectly by an individual, organisation, event, or product. It is measured in units of carbon dioxide equivalents (CO<sub>2</sub>e) to account for the varying global warming potentials of different gases.**

In the UK house building, residential retrofit, home renovation, and extension sectors, understanding and reducing carbon footprints is critical for achieving sustainability goals and complying with Building Regulations. The UK government has set a target of achieving net-zero carbon emissions by 2050, making carbon footprint reduction a key focus in construction and retrofit projects.

## **Practical Examples:**

1. **New Builds:** Incorporating energy-efficient materials, renewable energy sources (e.g., solar panels), and high-performance insulation to minimise emissions during construction and operation.
2. **Retrofits:** Upgrading existing homes with double-glazed windows, heat pumps, and improved insulation to reduce energy consumption and associated emissions.
3. **Extensions:** Using sustainable materials like timber and designing for natural ventilation to lower the carbon footprint of home extensions.

## **Related Terms:**

1. **Embodied Carbon:** The total GHG emissions associated with the production, transportation, and construction of building materials.
2. **Operational Carbon:** The emissions produced during the day-to-day use of a building, primarily from heating, cooling, and electricity.
3. **Net Zero Carbon:** Achieving a balance between the amount of GHG emissions produced and the amount removed from the atmosphere.
4. **Passivhaus Standards:** A rigorous voluntary standard for energy efficiency in buildings, reducing operational carbon footprints.
5. **Energy Performance Certificate (EPC):** A UK requirement that rates a building's energy efficiency and suggests improvements.
6. **Approved Document L:** Part of the Building Regulations in England, focusing on the conservation of fuel and power in buildings.
7. **Greenhouse Gas Protocol:** A global standard for measuring and managing GHG emissions, often used in carbon footprint calculations.