

# WHOLE LIFE CARBON BITESIZE LEARNING



ADVANCING NET  
**ZERO**

## Net 0 Carbon Buildings

**2030**

All new buildings must be net zero operational carbon with a 40% reduction in embodied carbon

**2050**

All buildings (including existing) must be net zero in both embodied and operational carbon

### Construction

'When the amount of carbon emissions associated with a building's product and construction stages up to practical completion is zero or negative.'

### Operational Energy

'When the amount of carbon emissions associated with the building's operational energy on an annual basis is zero or negative.'

a company's carbon footprint

57% : 43%  
impact between now and 2040<sup>1</sup>

## Scope 1, 2 & 3 emissions

### DIRECT emissions

from company operations

**1**

### INDIRECT emissions

from purchased energy

**2**

### INDIRECT emissions

from upstream & downstream supply chain

**3**

**Embodied carbon:** emissions associated with materials and construction processes throughout the whole lifecycle of a building

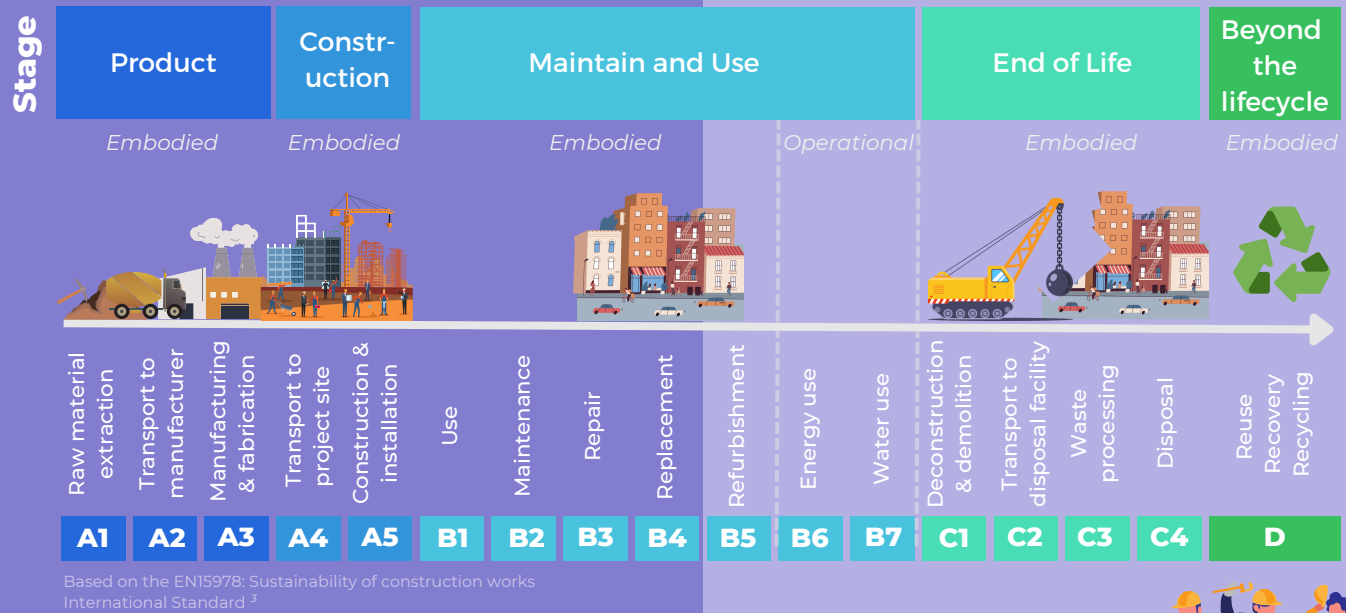
**Operational carbon:** emissions associated with energy used to operate the building

## Whole Life Carbon (WLC)

The combined total of embodied and operational emissions over the whole life cycle of a building. The whole life cycle of a building is the entire life of a building from material sourcing, manufacture, construction, use over a given period, demolition and disposal, including transport emissions and waste disposal.

**WLC THINKING**  
considering operational and embodied carbon emissions together so as to optimise their relative and combined impacts' (RIBA)<sup>2</sup>

This is the only way we will achieve Net Zero targets



Note that carbon is used as the shorthand proxy for 'carbon dioxide equivalent' (CO<sub>2</sub>e)

## £ Carbon Pricing \$

A carbon price is a monetary value assigned to one tonne of carbon dioxide equivalent (tCO<sub>2</sub>e) to encourage polluters to 'internalise' the cost of their environmental damage and reduce the amount of greenhouse gases (GHGs) they emit into the atmosphere.

How the carbon price is set and how the resulting hypothetical or realised funds are spent varies from organisation to organisation.

**25%**

of global emissions are expected to be under some carbon pricing mechanism by 2025 (UNFCCC)

**Emissions trading schemes (cap-and-trade systems)**  
National or international governments implement carbon pricing in compliance-based schemes.

Carbon pricing will promote investment, research, and innovation in clean technologies!

**Internal Carbon Pricing (ICP)**  
Organisations internally assign their own estimated cost of carbon emissions through 'shadow pricing' or an 'internal fee'.

<sup>1</sup>The current UKGBC Renewables & Offsets Guidance recommends following the values set in the HM Treasury's Green Book.<sup>4</sup>