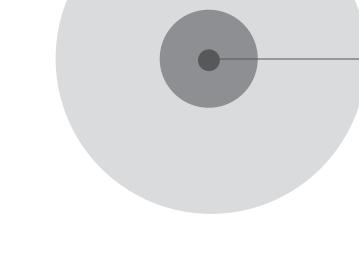
## Carbon Emissions in the UK Built Environment

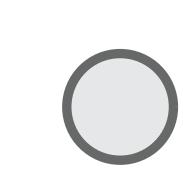
## Achieving 80% Reduction by 2050

This infographic is based on the Green Construction Board's Low Carbon Routemap for the Built Environment. Development of the Routemap was managed by WRAP, working in collaboration with Arup and the Climate Centre. The carbon emission sources included in the analysis and their values are based on the Routemap. For more information visit www.greenconstructionboard.org.

For each input, absolute values in 2050 are provided, unless followed by a 🔔 to denote a **Draught Proofing** percentage increase between 2010 and 2050 or a 🔻 to denote a decrease. 18,337 K Easy Homes avity Wall Insulation 20% 8,682 K Easy Submetering Homes 1,190 K Hard 20% 5,900 K Easy Homes Solid Wall Insulation +Controls 20% 1,074 K Hard 5829 K Easy Homes 20% 7% District Heating 50% 41% Heat Glazing G-Values Pumps 15% 25% District Heating Glazing Resistive Heating 100% Air **U-Values** Heat 50% Delivery Panels Hard **U-Values** Heat Retrofits Pumps Delivery 10% Easy Cooling Retrofits Delivery Mean Technology Temperature Improvement v 2010 Best Water 90% Use Performance Gap 50% Lighting Technologies 100% Air v Best Practice Conditioning Lighting Technology Energy Savings Cooling 51 % Gas Boiler New Performance 3m<sup>2</sup>/household Existing Heat Pumps Resistive 15% Delivery Solar Thermal Existing Panels Operational Operational Heat Domestic Non-Domestic Resistive Heating Capital Operational Carbon Infrastructure Metals **Built Environment** Industry 43% Concrete Existing Industry Efficiency 31% Brick Industry Efficiency Glass 61% Landfill Industry Waste Efficiency Growth of Plastic Infrastructure Industry 50% Spending Efficiency 30% CCS in Lighting Materials Technology Energy Sector Savings 2.3% Materials 15% Efficiency **Compound Annual** By Design Efficiency 100% 70% Transportation Carbon Intensity 5% 49% 89% Legend



Baseline 1990 Carbon Dioxide Emissions (MtCO2e) 2050 Carbon Dioxide Emissions (MtCO2e)



Interventions and Assumptions for Emissions Reductions

## Carbon emission sources covered

- Operational Non-Domestic includes heating, cooling, ventilation, hot water, and lighting and excludes cooking, other appliances, and plug loads.
- Operational Domestic includes heating, cooling, ventilation, hot water, and lighting and excludes cooking, other appliances, and plug loads.
- Operational infrastructure includes emissions from water/wastewater, outdoor lighting and construction and demolition (C&D) waste treatment,
- and excludes emissions from use of infrastructure by vehicles. Capital carbon includes direct process emissions and indirect emissions from the manufacture and production of UK and imported construction materials and products, emissions from the transport of materials, emissions associated with professional services in support of construction, and all C&D work on site.

