

## Climate Emergency - Caunton Engineering's Road to Net Zero

We have seen much in the media in recent years, focussing on climate change and the negative impact humans are having on the environment. Climate change is driven by human activities emitting more greenhouses gasses, broadly referred to as **CO<sub>2</sub>e**, or Carbon Dioxide Equivalent, into the atmosphere every year than the planet can absorb. This in turn has caused an increase in global temperatures of almost 1 degree Celsius since industrialisation and with it an increase in extreme weather events such as flooding, drought, storms and fires, and the hugely negative impact on the planets biodiversity systems.



In 2015 The Paris Agreement, a legally binding international treaty was adopted by 196 countries at COP 21 in Paris. Its goal is to limit global warming to below 2 degrees Celsius, but **preferably 1.5 degrees Celsius** compared to pre-industrial levels, which is only 0.5 degrees higher than current levels.

The UK Government in 2019, amended the UK Climate Change 2008 Act to set the target of reducing our CO<sub>2</sub>e emissions by 100% before 2050, compared to 1990 levels. This **Net Zero** target, requires a reduction of emissions, combined with any necessary emissions being balanced by offsetting an equivalent amount of CO<sub>2</sub>e, with a focus on reducing energy consumption, utilising renewable energy sources, introducing new and emerging technologies such as carbon capture, carbon storage, restoring the natural habitat, and re-balancing critical biodiversity systems.

The UK Government is already working towards reducing emissions, with intermediate targets of 68% set for 2030, and to a 78% reduction set for 2035, compared to 1990 emission levels.

Construction activities and the use of buildings, accounts for almost 40% of global energy-related emissions of CO<sub>2</sub>e, with fifty percent being embodied carbon, two thirds of which is attributable to the “building structure”, which we can **directly influence**. The embodied carbon of a building is the amount of CO<sub>2</sub>e that has been emitted in order to enable it to be built.

These percentages are substantial, and begin to make more sense when put into some context, for example, **one tonne** of steel produced using the Basic oxygen steelmaking process (BOS) emits the same CO<sub>2</sub>e, as:

- **9000 miles** in an average UK family car
- **3 one way flights** to New York
- **2 years** of food and drink for an average UK family

The task of achieving Net Zero by 2050 is a substantial challenge, but one which can be met through targets, commitment, technology, innovation, legislation and restoring the natural habitat and biodiversity systems – all of which requires Government leadership, legislation and support.

Caunton Engineering is committed to achieving these targets, and have established an initial steering and working group, comprising Matthew Shimwell, Steven Waterhouse, Kevin Lomas, Stephen Wray, Darren Haddock, Julian Harrold, Jack Handley in order to set out our journey to Net Zero, and formulate our roadmap.

To achieve our goal of Net Zero, we will require and seek the input and commitment from the wider business and our supply chain partners.

The BCSA continues to provide us support and guidance, and we will adopt and utilise their 2021 carbon footprint tool to ensure consistency of carbon reporting across the UK structural steelwork sector, whilst taking cognisance of their UK structural steelwork 2050 decarbonisation roadmap.

We are pleased to announce the business successfully secured BCSA sustainability charter “Gold” status accreditation during 2021, which provides us a positive foundation to build upon.

