



# Net Zero Carbon Action Plan



June 2022



**Balfour Beatty**  
Living Places



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## Foreword

We all have a part to play in protecting our environment and tackling the climate crisis. Rooted in the local communities they serve, many of our customers stand on the frontline of that fight. From building community resilience to the impacts of climate change, to taking action to decarbonise their portfolios as significant land and asset owners in their own right, our customers are central to tackling climate change.

At Balfour Beatty Living Places, our customer focus is second to none. We strive to always deliver more, better for our customers, helping them tackle their challenges head-on and exceed their ambitions. We are committed to using every tool in our armoury to drive forward sustainable solutions that will support them in meeting their net zero targets.



Balfour Beatty has long been at the forefront of the construction and infrastructure industry's net zero transition. Since the publication of Balfour Beatty's

first Sustainability Strategy in 2009, reducing our carbon footprint has been at the heart of how we do business. The publication of our refreshed Sustainability Strategy, Building New Futures, in 2020 sets out our ambition to go Beyond Net Zero Carbon by 2040 together with a bold target to halve our 2020 carbon emissions by 2030, including Scope 3 emissions.

This document articulates how we will deliver those ambitions across Balfour Beatty Living Places. Encompassing the materials we procure, the vehicles we use, the upskilling of our workforce and our commitment to only work with supply chain partners that share our vision and values. It transparently sets out in detail the specific steps we will take to significantly reduce the carbon impact of the work we do on behalf of our customers to help them deliver their own decarbonisation goals.

Overseen by me and my Senior Leadership Team, our talented in-house team of experts and our trusted supply chain partners will support our delivery teams to ensure that we achieve these targets and in doing so, leave a positive lasting legacy we and our customers can be proud of.

**Steve Helliwell**  
Managing Director,  
Balfour Beatty Living Places

Images on cover:  
Top - Living Wall Milbrook Roundabout  
Right - Derby Street Lighting  
Bottom - South Tyneside Lighting

# Beyond Net Zero Carbon

In the rapidly changing world we live in, making a positive contribution to communities requires all of us to pull in the same direction and to be bold in ensuring that how we operate helps, rather than hinders, in addressing the big societal challenges we all face. Without question, climate change is chief amongst those global challenges.

That is why Balfour Beatty has set out its ambition to go Beyond Net Zero Carbon by 2040.

We know that the building and construction sector has a significant environmental footprint. It accounted for the largest share of both global final energy use (36%) and energy-related CO<sub>2</sub> emissions (39%)<sup>1</sup> in 2018. As such, the industry has a key role to play in abating the terrible consequences of climate change being seen across the world.

That's why we're taking action to reduce the net carbon emissions of our direct and indirect operations to zero by 2040, by continuing to implement the Institute of Environmental Management and Assessment's (IEMA) Greenhouse Gas Management Hierarchy<sup>2</sup>.

To really shift the dial on this, we're collaborating with our supply chain partners and

aiming for all products and materials we procure to be net zero carbon by 2040. In limited cases where we aren't able to reduce emissions, we will invest in environmental projects, in the form of carbon offsets, to make sure we go beyond net zero carbon by 2040.

Here's some of the actions we're taking:

- Working with our supply chain partners to report and reduce embodied carbon in materials they supply to us
- Developing new solutions and technologies to drive net zero outcomes for our customers by collaborating across the value chain
- Switching to renewable electricity across all our operations
- Decarbonising our plant and fleet, including switching from diesel to electric, hybrid or hydrogen powered solutions

## 2030 target

Achieve our science-based carbon reduction target<sup>3</sup>

## Measurement

Scope 1, 2 and 3 emissions

**Primary UN Sustainability Development Goal**

**13** CLIMATE ACTION



## IEMA's Greenhouse Gas Management Hierarchy<sup>2</sup>



### Eliminate

Our decisions will consider options to eliminate carbon emissions



### Reduce

We will use resources efficiently to lower our carbon intensity



### Substitute

We will adopt low carbon alternatives



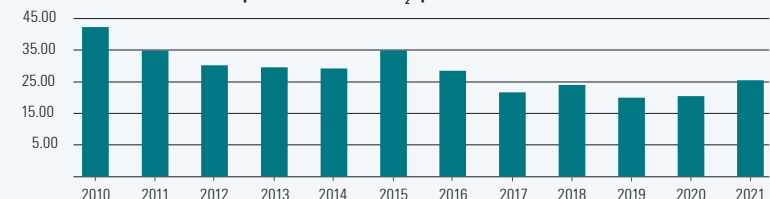
### Compensate

We will offset unavoidable emissions through environmental projects

## Did you know?

We've reduced our carbon emissions by 39% since 2010.

Scope 1 & 2 emissions in tCO<sub>2</sub>e per £m revenue



<sup>1</sup> – <https://www.unenvironment.org/resources/publication/2019-global-status-report-buildings-and-construction-sector>

<sup>2</sup> – <https://www.iema.net/document-download/51806>

<sup>3</sup> – We have formally committed to setting a science-based target to reduce our carbon emissions which we will be agreeing with Science Based Targets initiative

# Eliminate

## Taking action to eliminate carbon emissions

Eliminate is our highest level of intervention and allows us to completely remove plant, vehicles, materials, fuels and processes that unnecessarily generate carbon through our delivery mechanisms.

### Electric plant trial

To help reduce carbon consumption and improve air quality, our teams are utilising electric powered plant and equipment across our Warwickshire Highways Maintenance contract. The battery-operated equipment including a leaf-blower, hedge cutters and chainsaw help to minimise environmental impact through zero emissions as well as improving the safety of our workforce by reducing the risk of hand arm vibration syndrome.



Vehicle emissions	Scope 1&2	Scope 3	How?
Small vans under 3.5t	Yes	–	No non-electric vehicles ordered after 2023. All electric fleet by 2025
3.5t to 7.5t	Yes	–	No non-alternative fuel vehicles ordered after 2025
Over 7.5t	Yes	–	No non-alternative fuel vehicles ordered after 2027
Company cars	Yes	–	No pure diesel company cars by 2024. No pure petrol company cars by 2025
Hydrogen HGVs	Yes	–	Hydrogen fuel for all new HGVs by 2030

Plant and welfare emissions	Scope 1&2	Scope 3	How?
Emissions Compliance Verification (ECV)	Yes	Yes	100% of plant to have ECV markings by 2023
Small tools and hand held plant	Yes	–	100% battery operated by 2023
Excavators and ride on plant below 3t	Yes	–	80% electric hybrid ride on plant by 2025
Excavators and ride on plant above 3t	Yes	–	Only alternative fuelled plant by 2027
Generators	Yes	–	2022: Solar hybrid generators in use as standard (where suitable) 2030: Hydrogen generators over 30kVA as standard on all sites
Site welfare	Yes	–	Now: Procured via Balfour Beatty's Site Mobilisation Hub and using the latest photovoltaic and energy distribution (EcoNet) technologies
Specialist plant	Yes	–	Alternative fuel plant only ordered after 2030 Use of exhaust scrubbers on all diesel plant by 2023
Depot and office energy	Yes	–	No pure diesel company cars by 2024. No pure petrol company cars by 2025

# Reduce

Lowering our carbon intensity through efficient resources

Wherever possible, we will always look to reduce the amount of carbon we generate, either through alternative designs, plant and materials or through the use of data and information to help support better decision making.



**Utilising sustainable materials**

Our teams are utilising hydraulically bonded materials (HBM), an aggregate which hardens chemically with water, to provide an environmentally friendly and cost-effective solution to full depth carriageway reconstruction.

The HBM solution has been used on our Spencer Road Project in Southampton. The approach enables us to dig down to a shallower depth of 275mm, compared to the traditional reconstruction approach of 700mm. This reduction has generated significant carbon savings of over 1,500kg and has helped us divert 1,463 tonnes of waste material from landfill.

In addition, this method improves safety by eliminating the potential for service strikes by minimising the depth to which we need to excavate.

Reduced carbon intensity	Scope 1&2	Scope 3	How?
<b>Better use of data</b>	Yes	–	10% annual reduction in emissions through better use of telematics data (fleet and plant) and logistics solutions
<b>New and virgin materials</b>	Yes	Yes	75% increase in the use of recycled, reused or diverted from landfill materials by 2025
<b>Plant substitutes</b>	Yes	Yes	2023: Onwards trials of plant-based products for construction activities
<b>Innovation</b>	Yes	Yes	Ongoing: Working with industry experts and suppliers to identify opportunities not currently available to reduce our carbon intensity

# Substitute

## Adopting low carbon alternatives

Where we are unable to eliminate carbon from our processes, we will seek to substitute those elements with high-carbon content with alternatives.

Materials and packaging	Scope 1&2	Scope 3	How?
<b>Asphalts</b>	Yes	Yes	Recycled, low temp or cold asphalts used as standard on all projects by 2023 (dependant upon customer specification and agreement)
<b>Recycled and reused materials</b>	Yes	Yes	2022: Each project / contract to have a waste management / recycling plan in place
<b>Cementitious products and materials</b>	Yes	Yes	50% reduction in cementitious material usage by 2024 and a 75% reduction by 2027.
<b>Single use plastics</b>	Yes	–	No single use plastics on site or in offices by 2023
<b>Design for Net Zero</b>	Yes	Yes	2023: Implement a programme of educational and awareness courses to help better inform staff, customers and delivery partners
<b>Travel</b>	Yes	Yes	2022: Sustainable travel plans and smart working plans in place for all projects, offices and contracts
<b>Expert</b>	Yes	–	All projects / contracts to have a carbon lead, trained in carbon literacy



### Installing energy saving measures in Herefordshire

We are significantly reducing energy consumption following energy audits on our Herefordshire Public Realm contract. LED lighting was installed to default vacant rooms to 10% power whilst also individually detecting occupancy and increasing power to 100%.

Solar photovoltaic array panels were also installed to generate financial savings and income from the feed-in tariffs scheme, a government programme designed to promote the uptake of renewable and low-carbon electricity generation technologies.

# Compensate

Offsetting unavoidable emissions through environmental projects

Compensate is the final carbon reduction measure and will allow us to offer measures that provide alternative compensation for the carbon that we cannot avoid generating.



**Improving air quality with a living wall**  
Following extensive reconstruction works on Millbrook Roundabout, our teams recognised the importance of local air quality in Southampton and installed 'Living Walls' to shroud the stark nature of the concrete pillars. Working with Biotecture, a specialist living wall company, ten wall panels were fabricated offsite and installed on the roundabout. The living walls offer many benefits to the public and the environment and are populated with over 11,000 plants comprising of 17 different plant species.

Offset initiatives	Scope 1&2	Scope 3	How?
<b>Social value</b>	Yes	–	2023: Involved plans delivering at least 50% social value benefit – measured by the Social Value Portal
<b>Carbon offset</b>	Yes	–	2025: Scope 1 and 2 - Carbon offset initiatives linked to Balfour Beatty Group's sustainability strategy. 2023 onwards, where appropriate and required, local contract/projects proactively engaged in customer-led local offset programmes
<b>Customer selection</b>	Yes	–	We will work collaboratively with customers to ensure we meet our shared aspirations and targets
<b>Supplier selection</b>	Yes	Yes	We will only work with suppliers committed to meeting our net zero carbon ambitions and goals
<b>Biodiversity Net Gain (BNG) (Balfour Beatty Ground Engineering and Balvac exempt)</b>	Yes	–	By 2023, 50% of all relevant projects over £250,000 will include BNG analysis to better inform designs and customers

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[www.balfourbeatty.com](http://www.balfourbeatty.com)

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at [balfourbeatty.com/sustainabilitystrategy](http://balfourbeatty.com/sustainabilitystrategy)

