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Net Zero

A guide to planning a Net Zero fit out.

NET ZERO GUIDE 2025 EDITION

Getting started with Net Zero

Before you set out on your strategy for a Net Zero fit out, it is important to define what the term means. Net Zero has become a term associated with positive changes and responsible decisions but it's used interchangeably to mean a variety of things.

The term Net Zero refers to the removal of greenhouse gases going into our atmosphere caused by CO2 emissions.

It is estimated that the building and construction sector accounts for 37% of global CO2 emissions which is why it is a key consideration for all new and existing structures, but particularly commercial properties.

The Paris Agreement is a key piece of legislation which underlines the need for "balance between anthropogenic emissions by sources and removals by sinks of greenhouse gases in the second half of this century."

Defining Net Zero

The definition for Net Zero for corporate businesses, as per the Science Based Targets initiative (SBTi) and informed by the Carbon Trust, is explained as the below:

'To reach a state of net zero emissions for companies implies two conditions:

To achieve a scale of value-chain emission reductions consistent with the depth of abatement achieved in pathways that limit warming to 1.5°C with no or limited overshoot and;

To neutralise the impact of any source of residual emissions that remains unfeasible to be eliminated by permanently removing an equivalent amount of atmospheric carbon dioxide."

Contents

The Benefits of Setting a Net Zero Target

Legals

Net Zero no longer just sounds good - it is part of UK law. The UK government is aiming to reduce all direct emissions from public sector buildings by 50% and 75% by 2032 and 2037 respectively with all UK emissions are to reach net zero by 2050. Getting on board with Net Zero sooner rather than later could be beneficial in the future.

Financials

Net Zero is about benefiting the environment and reducing emissions but it can also help you improve energy efficiency and increase profits by lowering the cost of business operations. Being a Net Zero business may also open opportunities for funding and grants.

Talent Attraction

Gen Z and Millennial employees are now more openly seeking job roles with organisations that hold values that align with their own. Being a Net Zero business or at the least a low-impact business could be a crucial decision-making factor for future talent attraction.

Frameworks & Certifications

Achieving Net Zero Carbon is not just about cutting operational emissions but also reducing embodied carbon—emissions produced through the materials and construction of the fit-out itself.

Businesses looking to align with Net Zero goals must be guided by several frameworks and regulatory bodies that not only provide the technical and strategic guidance but also ensure that every phase of the office fit-out is aligned with the broader sustainability agenda.

To ensure that their Net Zero strategies are on track, businesses often work closely with advisory bodies such as the Carbon Trust. The Carbon Trust provides guidance on setting carbon reduction targets, tracking progress, and implementing strategies to meet Net Zero objectives. Regular reporting to such bodies helps organisations stay accountable, ensuring they not only meet but often exceed the regulatory requirements.

Key organisations you need to know:

UK NZCBS: The UK Net Zero Cross Building Standard is the UK's first cross-industry standard that brings together net zero carbon requirements for all major building types.

UKGBC: The UK Green Building Council's framework emphasises reducing both operational carbon and embodied carbon.

LETI: The London Energy Transformation Initiative talk about creating low-energy, low-carbon buildings as well as the use of materials/structures for their energy efficiency.

BREEAM: BREEAM is one of the world's leading sustainability assessment methods for infrastructure and building projects which covers a huge variety of sustainability factors.

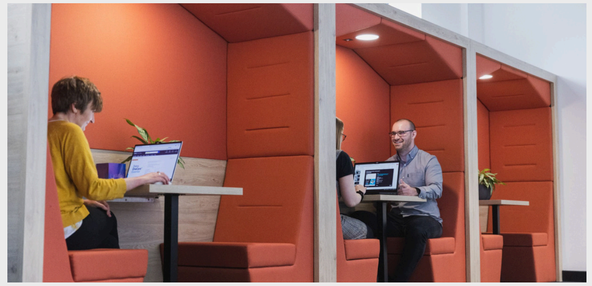
Carbon Trust: The Carbon Trust provides guidance on setting carbon reduction targets, tracking progress, and implementing strategies to meet Net Zero objectives.

Case Studies
Barcode Warehouse

Barcode Warehouse wanted a new Innovation and Customer Experience Centre after a period of strong growth and expansion. The 25,000 sq ft space in Newark showcases technology solutions and offers a flexible, collaborative working environment.

This project had to be delivered in line with the guidelines set out to us by the client, ensuring we took steps to mitigate any environmental impact throughout the project. The primary challenges revolved around the transformation of the structure, particularly the creation of a double-height reception area. This involved significant alterations, including cutting back the first floor and a complete redesign of the staircase.

Location	Newark
Type of Project	Office Design & Build
Size	25,000 sq ft
Client Sector	Technology
Timescale	7 weeks
Value	£3,000,000

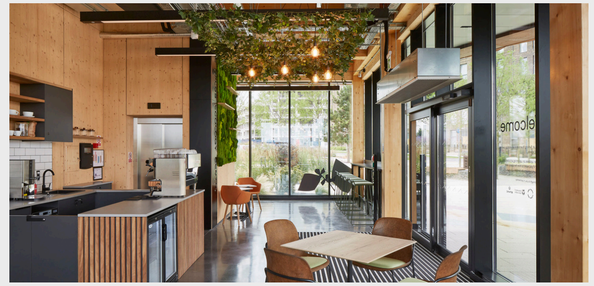


Case Studies
Barking Riverside

As part of the Barking Riverside multi-use regeneration project, there was a requirement for the development of a new multi-purpose community, ecology and events space is a cultural hub within a housing area. Known as The Wilds, this building was designed to create a strong architectural visual impact.

Barking Riverside Ltd chose Rhino from a tender process to refurbish the interior shell of this icon into a post-covid multi-use space. This involved an entrance area with cafe along with flexible, agile spaces elsewhere. The building is rated BREEAM excellent, and therefore careful consideration had to be in place when selecting furnishings that would keep the sustainability theme of the space.

Location	Barking
Type of Project	Office Design & Build
Size	5,000 sq ft
Client Sector	Regeneration & Development
Timescale	5 weeks



The True Impact of a Fitout

Let’s compare two fitout scenarios of a 16,000 sq ft office for 125 staff. These are the estimated total carbon footprints for the two scenarios are as follows:

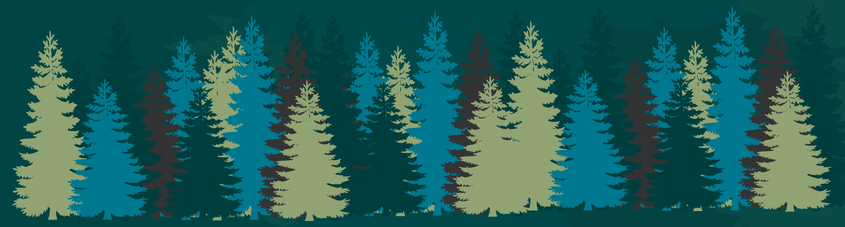
Scenario A

Cat B Fitout
100% new materials and furniture
Fresh and modern design
Maximum embodied carbon
Significant long-term environmental cost
Total carbon footprint = ~ 79,125 kg CO2e

Scenario B

Cat B Fitout
40% existing materials, 25% existing furniture
Minimised waste
Reduced embodied carbon
Lower environmental impact
Total carbon footprint = ~ 65,107 kg CO2e

Scenario B delivered a significant reduction of around 14,017.5 kg CO_2e. This is equivalent to 700 trees soaking up CO_2 for an entire year.



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Materiality Matters

Material selection is one of the most significant factors in determining the carbon footprint of an office fit-out. The decision between using virgin materials or embracing a circular economy approach can dramatically affect both the embodied carbon and the overall sustainability of the project.

What does material selection look like in your fitout?

- **Reusing existing furniture from the previous office**
- **Purchasing second-hand items**
- **Sourcing materials from local suppliers**
- **Locally sourced, recycled, or upcycled materials**

By focusing on on minimising waste and keeping materials in use for as long as possible, you can drastically reduce your carbon impact and achieve a net zero fitout. We can always support you with material selection for your fitout and provide options on flooring, surfaces and fabric to align with your goals.

The Role of Technology in Achieving Net Zero

Advanced energy monitoring systems can provide businesses with insights into energy consumption patterns, identifying inefficiencies and allowing for quick adjustments. This continuous optimisation process is a key part of maintaining a Net Zero office. Over time, the data collected helps inform further sustainability strategies, ensuring that the building remains as efficient as possible long after the initial fit-out is complete.

If you want to take a more technologically-advanced approach to securing Net Zero in your workplace, we can advise on technology and install features that contribute toward achieving your goal. There are many different products and brand names on the market so to ensure you invest in the right products, our Net Zero specialists can help inform your decision.

Incorporating smart building technologies further improves space efficiency and sustainability. For instance, by linking lighting and HVAC systems to real-time occupancy data, businesses can significantly reduce energy consumption. These systems ensure that energy is only used when and where it's needed. When occupancy is low, lighting and air conditioning automatically adjust, optimising energy use without requiring manual intervention.

In the quest to reduce carbon emissions, technology plays a crucial role. From smart sensors that track real-time energy consumption to advanced data analytics platforms, technology allows businesses to optimise resource use and identify inefficiencies.

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Steps to a Net Zero Fit Out

Measure

Before you can begin your journey, you have to understand what your current benchmark is - what are your emissions.

You can establish this through a third-party organisation or by measuring your global Scope 1, 2 and 3 emissions yourself.

Outline

Once you understand your own emissions and potential impacts of your business operations, you can outline your goals and objectives.

Your primary focus should be a goal to work towards over both a short and long-term period. This is about postive change and not quick wins.

Commit

Committing to your Net Zero target is about creating accountability and defining your boundaries. There will be behaviours and processes you need to change and understanding the impact of individual elements will help you commit to reaching your goal.

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The Carbon Footprint Glossary

This A-Z glossary offers a comprehensive guide to Net Zero Carbon in the workplace, helping you understand key terms and concepts for creating sustainable, low-carbon work environments.

A

Air Tightness: The degree to which air cannot leak in or out of a building. Improving air tightness reduces energy consumption and carbon emissions, as less energy is required for heating or cooling.

Asset Efficiency: The optimal use of physical resources (e.g., office equipment, furniture, or space) to reduce waste, energy consumption, and the overall environmental impact.

B

Biodegradable Materials: Materials that decompose naturally by microorganisms. Biodegradable products reduce waste in landfills and support sustainable waste management.

Biomimicry: The design of systems or products inspired by biological processes, leading to more sustainable solutions in materials, energy, and design practices.

C

Circular Economy: An economic model focused on designing out waste and keeping resources in use for as long as possible, through reuse, repair, remanufacturing, and recycling.

Circular Supply Chain: A supply chain model that incorporates circular economy principles, prioritising the use of renewable energy, reducing waste through design, and aiming for the reuse of products and materials.

Closed Loop Recycling: A process where materials are recycled back into the same product without losing quality, keeping resources in circulation indefinitely.

Composting: A process where organic waste (food, leaves) breaks down into nutrient-rich soil, which can be used to improve soil health and reduce landfill waste.

Cradle to Cradle (C2C): A design philosophy where products are created with the intention that they can be fully reused or recycled, forming a continuous loop of reuse without creating waste.

Cradle to Gate: A partial lifecycle assessment measuring the environmental impact from raw material extraction to the factory gate, before it is transported to consumers.

Circular Metrics: Measurements used to assess how efficient a product or company is in the context of the circular economy. These metrics could assess the percentage of recyclable material in a product, the durability of the product, or the efficiency of the products take-back program.

D

Design for Disassembly (DfD): Designing products in such a way that they can be easily disassembled for reuse, repair, or recycling at the end of their life.

Design for Recycling (DfR): The concept of designing products with materials that can be easily recycled after use, reducing environmental impact and material waste.

Downcycling: Recycling process that converts materials into new products of lower quality and reduced functionality. While better than disposal, downcycling diminishes the material's future use potential.

E

Eco-design: Designing products with a focus on minimizing environmental impact throughout their lifecycle, from production to disposal.

Energy Efficiency: Using less energy to provide the same service, reducing energy consumption and associated carbon emissions.

Energy Recovery: Converting non-recyclable waste into usable energy, such as electricity or heat, reducing waste sent to landfills.

Extended Producer Responsibility (EPR): A policy approach where manufacturers are responsible for the entire lifecycle of their products, especially in taking back, recycling, or properly disposing of the product at end of life.

F

Fossil Fuel-Free Workplace: A workplace that uses no fossil fuel-based energy, opting instead for renewable energy sources like solar, wind, or hydropower.

G

12

Gate to Gate: Lifecycle assessment that focuses on the environmental impact of production processes within a single manufacturing facility.

Green Building: A building designed or retrofitted to be environmentally responsible, focusing on energy efficiency, sustainable materials, and reduced water use.

Green Economy: An economic system that prioritizes sustainable development without degrading the environment, promoting clean energy, and reducing waste.

H

Heat Recovery Systems: Systems that capture and reuse heat from processes that would otherwise be wasted, improving energy efficiency.

I

Industrial Symbiosis: A system where waste or by-products from one industrial process are used as raw materials by another, reducing waste and resource consumption.

J

Just-in-Time Manufacturing: A production strategy that reduces waste by only producing goods in response to actual demand, minimizing overproduction and excess inventory.

K

Kinetic Energy Recovery Systems: Systems that capture and store kinetic energy, such as in braking systems, to be reused later, improving energy efficiency.

L

Lifecycle Assessment (LCA): A method of assessing the environmental impacts of a product throughout its lifecycle, from raw material extraction to disposal.

Life Cycle Costing (LCC): A method for calculating the total cost of ownership of an asset, including acquisition, operation, maintenance, and disposal, emphasizing sustainability and long-term cost efficiency.

M

Material Flow Analysis (MFA): A method for tracking the flow of materials through a system to identify inefficiencies and opportunities for reducing waste and resource use.

N

Natural Capital: The world’s stock of natural resources, including geology, soil, air, water, and living organisms, which provide ecosystem services vital to human survival and economic activity.

Net Zero Carbon: A state where the amount of carbon emissions produced is balanced by the amount removed from the atmosphere, either through carbon offsetting or eliminating emissions entirely.

O

Offsetting: A method to compensate for emissions by funding projects that reduce or capture carbon, such as reforestation or renewable energy projects.

P

Product-as-a-Service (PaaS): A business model where customers pay for the service a product provides, rather than owning the product. The provider retains ownership, incentivizing longevity and reuse.

Product Life Extension: Strategies aimed at increasing the lifespan of products through repair, maintenance, upgrades, or remanufacturing, reducing waste and the need for new resources.

Q

Quality Recycling: Ensuring that recycled materials retain their original properties, allowing them to be reused in the same or similar products without degradation.

R

Regenerative Design: A design philosophy that not only seeks to do less harm by reducing impact but also aims to proactively improve the environment through positive contribution; restoring and regenerating natural ecosystems and resources.

Remanufacturing: Restoring used products to a “like-new” condition through processes such as repair, refurbishment, or replacing parts, reducing the need for new resources.

Renewable Energy: Energy generated from naturally replenishing sources like wind, solar, and hydropower, which have low environmental impact.

Resource Recovery: The process of recovering valuable materials from waste for reuse, reducing the need for virgin materials and minimizing environmental impact.

S

Social LCA: A method of assessing the social and socio-economic impacts of a product throughout its lifecycle, integrating these factors into traditional environmental Life Cycle Assessments.

Sustainable Development: Development that meets present needs without compromising the ability of future generations to meet their own needs, balancing economic, environmental, and social factors.

T

Take-back System: A system where manufacturers are responsible for taking back products at the end of their life, either to recycle or refurbish them.

U

Upcycling: The process of transforming waste materials or unwanted products into new products of higher value or quality.

V

Vertical Integration: A strategy where a company controls multiple stages of the supply chain, often allowing for better control of sustainability practices and reduced carbon footprints.

W

Waste Hierarchy: A framework for prioritizing waste management strategies, with prevention at the top, followed by reuse, recycling, energy recovery, and disposal as the last resort.

X

Xeriscaping: A landscaping approach that reduces water use by using drought-resistant plants and other water-efficient techniques, contributing to water conservation in the workplace.

Y

Yield Management: Optimizing the use of resources, such as space or energy, to maximize efficiency and minimize waste.

Z

Zero Waste: A philosophy aimed at redesigning resource life cycles so that all products are reused or recycled, preventing any waste from ending up in landfills or incineration.

Where next with Net Zero?

Designing an office fitout for a Net Zero Carbon goal is a multifaceted process that requires careful consideration of regulatory frameworks, material selection, and energy management.

By embracing circular economy principles, integrating smart building technologies, and partnering with ethical disposal companies, businesses can reduce both their operational and embodied carbon while enhancing the sustainability of their office environments.

Ultimately, the path to Net Zero Carbon is not a single action but a series of thoughtful, interconnected decisions. From the design stage through to the management of resources after the project is complete, each step offers an opportunity to reduce environmental impact and contribute to a more sustainable future.

Get in touch and begin your Net Zero journey today.

“Since 2019, the total commercial floorspace with EPC B or higher has grown on average 8% a year to 2 billion sq. ft at the end of 2023. While the pace has been accelerating, the rate would need to more than double to 18% for all commercial properties to reach this requirement within the proposed 2030 deadline.”

Knight Frank, Meeting the Commercial Property Retrofit Challenge Series, 2024

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Creating Exceptional Spaces.

> The time when being unsustainable was still an option has all but gone.

Rhino invest in building enduring partnerships to support your long term success. We will ensure your spend is strategically aligned with your overall Net Zero targets.

Get in touch!

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