

Carbon Reduction Plan

K2 Architects / June 2024



Certified



This company meets high standards of social and environmental impact.

Corporation

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Commitment to achieving Net Zero

At K2 Architects, we are dedicated to achieving Net Zero. We plan to halve our emissions by 2030 and cut emissions to zero by 2045.

We recognise the urgent need to address climate change and are committed to taking meaningful actions to reduce our carbon footprint. Our strategy includes improving energy efficiency, investing in renewable energy, minimising waste, and promoting sustainable practices throughout our operations.

As a [Certified B Corporation](#), we are committed to transparency in our efforts and will regularly report on our progress toward achieving Net Zero.

Baseline Emissions

Baseline Emissions Footprint

Baseline Year: 1st April 2022 – 31st March 2023	
Additional Details relating to the Baseline Emissions calculations.	
<p>This was the first time we calculated our carbon footprint, so it established our baseline. It is based on our financial accounting year of April 2022-March 2023. Our Baseline calculation includes:</p> <p>Scope 1: Direct Emissions</p> <p>Scope 2: Indirect Emissions</p> <p>Scope 3 Categories:</p> <ol style="list-style-type: none">1: Purchased goods and services:2: Capital goods3: Fuel and energy-related activities4: Upstream transportation & distribution5: Waste generated in operations6: Business travel/Hotel stays7: Employee commuting/Teleworking <p>Our Baseline deviates from the requirements under PPN 06/21 as follows:</p> <p>Scope 3 Categories: 9: Downstream transportation & distribution are marked as zero as we do not sell products, we sell services (our time).</p>	
Baseline year emissions:	
EMISSIONS	TOTAL (tCO₂e)
Scope 1	1.64 (tCO₂e)
Scope 2	14.35 (tCO₂e)
Scope 3 (Included Sources)	36.25 (tCO₂e)
Total Emissions	52.2 (tCO₂e)

Emissions report

K2

1 Apr 2022 - 31 Mar 2023

Business Carbon Calculator

by Normative

Estimated total emissions

tonnes CO₂e

52.2

Country

United Kingdom of Great Britain and Northern Ireland

Sector

Construction and civil engineering

Scope 1	% of emissions	tonnes CO ₂ e
Fuel combustion	100.0 %	1.64

Scope 2	% of emissions	tonnes CO ₂ e
Heat	58.2 %	8.35
Electricity	41.8 %	6

Scope 3	% of emissions	tonnes CO ₂ e
Business travel	3.2 %	1.15
Purchased goods and services	35.4 %	12.8
Capital goods	61.5 %	22.3

Current Emissions

Reporting Year: 1 st April 2023 – 31 st March 2024	
EMISSIONS	TOTAL (tCO ₂ e)
Scope 1	0 (tCO ₂ e)
Scope 2	14.59 (tCO ₂ e)
Scope 3 (Included Sources)	21.51 (tCO ₂ e)
Total Emissions	36.1 (tCO₂e)

<p>Emissions report K2 1 Apr 2023 - 31 Mar 2024</p>	<p>Business Carbon Calculator by Normative</p>
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Estimated total emissions tonnes CO₂e

36.1

Country
United Kingdom of Great Britain and Northern Ireland

Sector
Construction and civil engineering

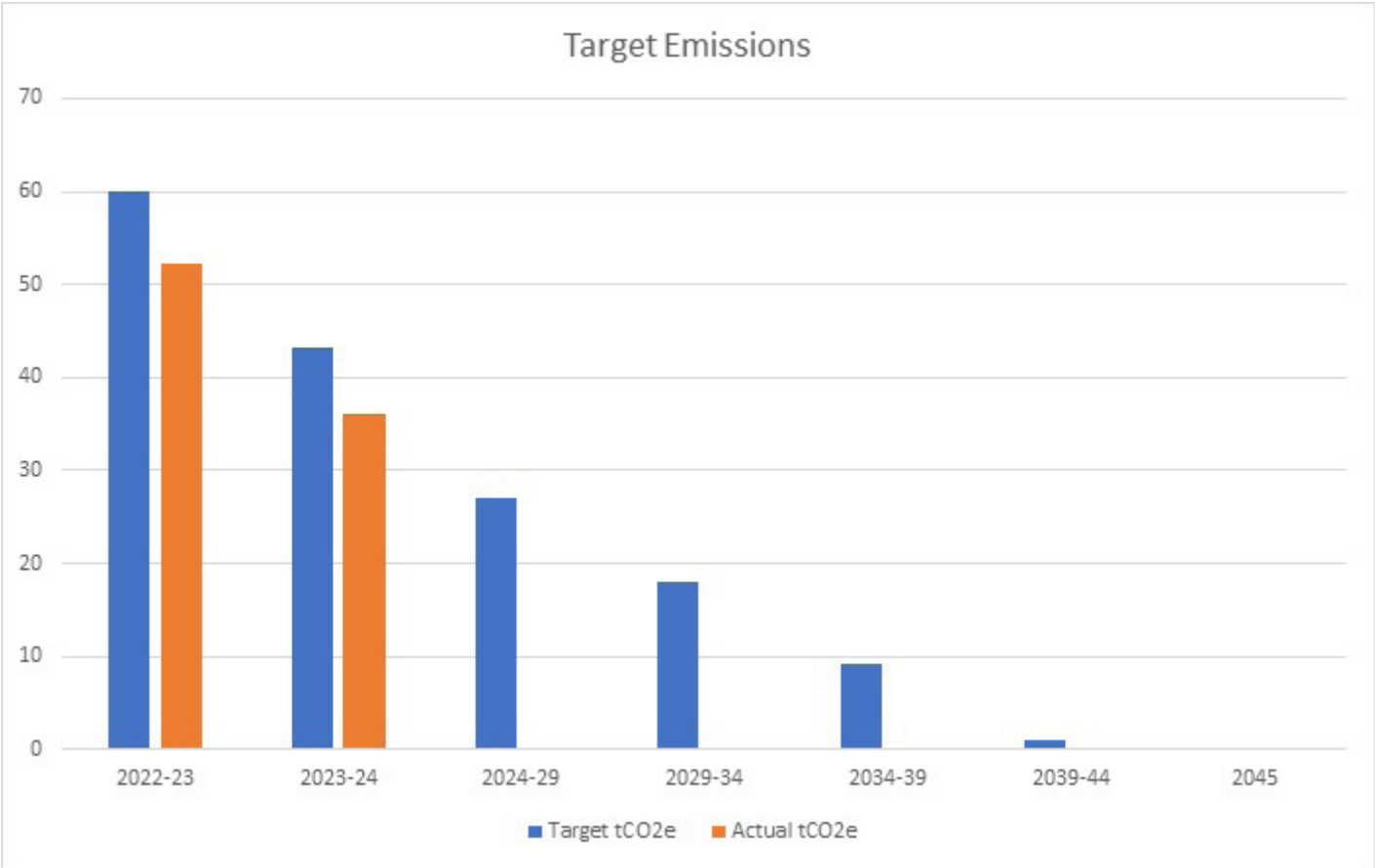
Scope 2	% of emissions	tonnes CO ₂ e
Electricity	42.6 %	6.21
Heat	57.4 %	8.38

Scope 3	% of emissions	tonnes CO ₂ e
Business travel	1.6 %	0.344
Purchased goods and services	78.1 %	16.8
Capital goods	20.3 %	4.37

Emissions Reduction Targets

To continue our progress toward achieving Net Zero, we have adopted the following carbon reduction targets. We project that carbon emissions will decrease by 1.8 tCO₂e per year or 9 tCO₂e over the next five years. If we continue this trajectory of reducing our emissions by 9 tCO₂e every five years, we will be **Net Zero by the year 2045.**

- 2022-2023 = 52.2 tCO₂e
- 2023-2024 = 36.1 tCO₂e
- 2024-2029 = 27.1 tCO₂e
- 2029-2034 = 18.1 tCO₂e
- 2034-2039 = 9.1 tCO₂e
- 2039-2044 = 0.1 tCO₂e



Current Emissions Reduction Initiatives

The following environmental management measures have been completed or implemented since the 2022-2023 baseline. The carbon emission reduction achieved by these schemes equates to 16.1 tCO₂e, a 36% reduction against the 2022-2023 baseline. These measures will be in effect when performing the contract.

- **Energy Consumption** – Our electricity supplier has changed over the past 3 years from non-renewable to 72% from renewable sources, and now 92% from renewable sources.
- **Lighting** – Office lights are equipped with motion sensors to automatically switch off when no one is present.
- **Heating and Cooling** – The HVAC in our office is powered by electricity from 92% renewable sources.
- **Employee Commuting** - We have a city centre-based office which is easily accessible by public transport, including trains, buses, and ferries. As all of our staff live in the Liverpool City Region, it is also possible for several employees to walk and cycle to work. We participate in the Merseytravel train pass scheme, which provides discounted train passes to employees for commuting. We also have a cycle-to-work scheme in partnership with Evans, making it easier for employees to access bicycles for their daily commutes
- **Business Travel** - We no longer travel to conferences internationally. Instead, we have opted to attend business events in England. Virtual meetings are preferred to mitigate travelling altogether. We work with local suppliers so that we can walk to each other's offices across the city centre. Wherever possible, business travel outside of the city is accessed by public transport (trains).
- **Office Equipment**—The manufacturing and use of computers, servers, and other electronic devices contribute to GHG emissions due to their energy consumption and carbon footprint. In 2022, we decided to upgrade all office computers to improve energy efficiency. Most of the old devices were given away so they could be used by others, and a small amount were recycled.
- **Waste Management** – Working with our landlord (Liverpool ONE), we ensure that none of our waste is sent to landfill. Across the estate, they are committed to 100% zero waste to landfill; 41% of the waste is recycled on-site, the rest is reclassified to identify further recyclable materials, and the remainder either gets transformed into construction materials or turned into energy at an Energy From Waste Facility (Source: Liverpool ONE Sustainability Report 2023).



Future Emissions Reduction Initiatives

The following environmental management measures will be implemented over the coming years. The carbon emission reduction achieved by these schemes will equate to a reduction of 9 tCO₂e every five years.

- **ISO 14001** - Add carbon reduction as an environmental aspect and ensure ISO data collected aligns with CRP Calculations.
- **Energy Consumption** - We diligently monitor and record our energy usage to gain insights into our consumption patterns. We have made a commitment to find a supplier that offers electricity from 100% renewable sources to mitigate our environmental impact. We have not set specific reduction targets due to expected growth in our team and corresponding energy consumption.
- **Office Equipment** - We actively prioritise using brand-new energy-efficient equipment. We will set computers and monitors to automatically turn off after a specified period of inactivity.
- **Purchased Goods and Services** - The production and transportation of office supplies (e.g., paper, stationery, furniture) involve GHG emissions. We plan to work with more local sustainable suppliers, starting with those already Certified B Corp.
- **Office Premises** - Continue to work with the Landlord to upgrade the office and make the building more energy efficient.
- **Water Usage** - We understand that the energy required to supply and treat water used in our office building can also contribute to GHG emissions. We use around 70 cubic meters of water annually, indirectly contributing to emissions from water treatment plants. We hope to work with our landlord to discuss options for rainwater harvesting.
- **Employees** - As the practice grows, we will revisit the plan, game out different scenarios, and build new net zero operating models based on what we have learned from our current plan. The main point is that we are not standing still and expecting things to just happen, we will periodically assess our position and make the necessary adjustments required to stay on target.
- **Carbon Offsetting** - We are currently looking at some initiatives, such as Greenly, planting trees and supporting other sustainable projects to absorb CO₂ from the atmosphere to offset our carbon footprint.



Reducing Carbon and Emissions in Building Design

As architects, we play a crucial role in mitigating climate change and promoting social inclusivity through the scale and reach of our projects. When clients prioritise sustainability and invest in green building practices, the collective impact on reducing emissions and promoting environmental sustainability is exponentially more significant than we can achieve through our operations alone.

Our clients must be committed to delivering sustainable outcomes to maximise our potential impact. However, this approach has its challenges. Higher upfront costs, resistance to change, and the complexity of integrating sustainable practices into traditional design processes can discourage some from investing in their application. However, it is possible to overcome these challenges and convince clients of the value of sustainability by framing it as a strategic business decision rather than just an ethical choice.

A range of strategies for promoting sustainable outcomes in our clients' projects are available. We can highlight the long-term benefits, such as cost savings from energy efficiency and reduced maintenance, increased property value, improved occupant health and productivity, regulatory compliance, and available incentives. We emphasise how sustainability enhances corporate social responsibility, brand reputation, and competitive edge. Using case studies, ROI analyses, and one-to-one workshops to communicate these advantages effectively helps us demonstrate that sustainability is not just a trend but a strategic and beneficial business decision to which we should all be committed.

Our Approach

K2 Architects' approach to delivering sustainable and equitable building design aligns with the principles set out in the RIBA Sustainable Outcomes Guide, which offers advice on achieving the UN Sustainable Development Goals (SDGs).

The guidance provides practical strategies for architects and clients to achieve successful outcomes for their building projects in nine of the UN's 17 SDGs. These SDGs address various social and economic challenges, from climate action to social equity.

With the support of our clients, we can align our project objectives with specific SDGs, such as affordable and clean energy (SDG 7), sustainable cities and communities (SDG 11), and responsible consumption and production (SDG 12).



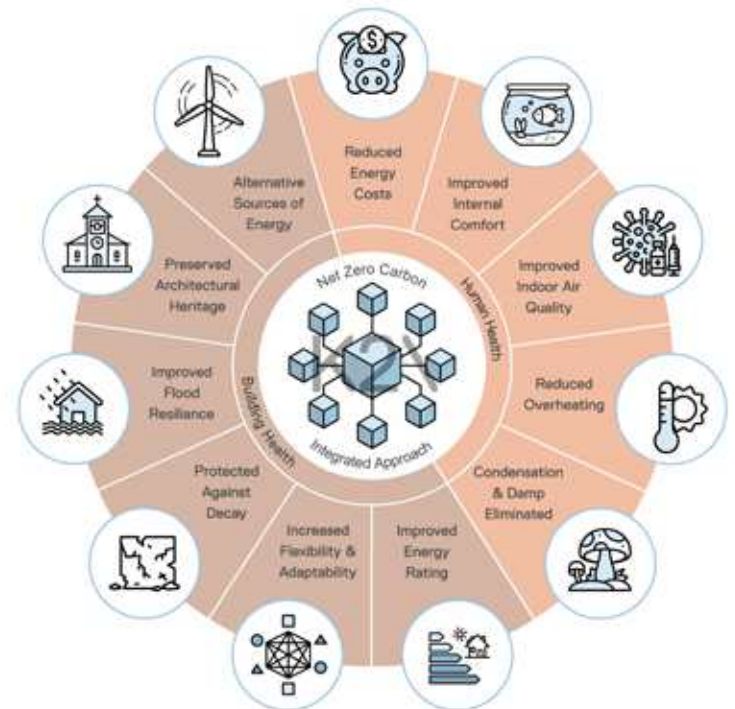
Key Strategies

Every architectural project is a unique blend of delivery strategies specific to its users and context. However, some of the most common tactics we apply are:

1. **Integrated Design Approach:** We engage stakeholders early to explore sustainable strategies like passive design, energy-efficient systems, and renewable materials, which reduce environmental impact and enhance building performance and occupant comfort.
2. **Life Cycle Assessment (LCA):** We can evaluate the environmental impacts of materials and construction methods over the building's life cycle to inform decisions that minimise carbon footprint and resource depletion, contributing to SDG 12.
3. **Community Engagement:** We foster inclusive design processes that address local needs and enhance social equity (SDG 10) by consulting diverse communities to create accessible, culturally sensitive, and socially sustainable spaces.
4. **Adaptive Reuse and Retrofitting:** We promote adaptive reuse of existing structures and retrofitting buildings to improve energy efficiency and resilience (SDG 9 and SDG 11), reduce waste, and conserve resources while revitalising urban areas.
5. **Monitoring and Evaluation:** Implement post-occupancy evaluations to measure performance against sustainability targets, ensuring continuous improvement and accountability, aligning with SDG 17.

By embracing these strategies, we can contribute to global sustainability efforts and enhance our competitive edge by meeting the increasing demand for environmentally and socially responsible design.

As architects, we have the expertise and vision to lead the charge towards a sustainable future. But we cannot do it alone. We need our clients to stand with us, prioritise sustainability, and see beyond the immediate challenges to the profound long-term benefits. Together, we can create buildings and communities that withstand the test of time and uplift the environment and society.



We explore ways of delivering sustainable outcome through strategic options analysis

Declaration and Sign-off

This Carbon Reduction Plan has been completed in accordance with PPN 06/21 and associated guidance and reporting standard for Carbon Reduction Plans.

Emissions have been reported and recorded in accordance with the published reporting standard for Carbon Reduction Plans and the GHG Reporting Protocol corporate standard and uses the appropriate Government emission conversion factors for greenhouse gas company reporting .

Scope 1 and Scope 2 emissions have been reported in accordance with SECR requirements, and the required subset of Scope 3 emissions have been reported in accordance with the

published reporting standard for Carbon Reduction Plans and the Corporate Value Chain (Scope 3) Standard.

This Carbon Reduction Plan has been reviewed and signed off by the board of directors (or equivalent management body).

Signed on behalf of K2 Architects Limited:



Date: 28/06/2024



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Certified



Corporation

This company meets high standards of social and environmental impact.