

# Our journey to a greener future.

Our carbon results.

August 2024



## AKT II commits to be a net-zero carbon business.

The climate emergency is more than a concern for us; it drives everything we do. While legislation places sustainability at the core of all architectural design, this only stands as our base touchstone. As we target net-zero, our sense of responsibility goes much further. In helping to create genuinely sustainable buildings, the structural engineer has an imperative duty to humankind.

We continue to maintain our commitment through different initiatives, such as:

- All of the electricity at our headquarters is provided by renewable sources. Our HQ was critically acclaimed for its environmental friendliness, achieving BREEAM Outstanding and LEED Platinum.
- As an environmentally friendly business we are focused on reducing carbon footprint both via our design engineering services and in the way we run our business operations. We are recognised as a 'Carbon Neutral +' organisation.
- We ensure that the greenhouse gas emissions associated to our operations from heating, business travel, commuting, working from home, water, printing paper and waste are minimised as much as possible, and that any residual emissions (those hard to decarbonise) are compensated for via certified offsetting methods - so that we are carbon neutral in our business operations emissions.
- We are using the Science-Based Target initiative's [SBTi](#) framework, we have set a near-term target consistent with keeping the global temperature increase below 1.5°C by 2030. The Absolute Contraction method was applied to the combined scope 2 & 3 emissions, resulting in a target to reduce emissions by 4.2% each year. Emissions have been consolidated through the operation control approach. We externally validated our science-based target meaning that we have aligned our emission reduction goal with the latest climate science and global climate objectives.
- We signed the ['Engineers Declare'](#) (Structural and Civil) commitment in 2019, and by continually taking positive actions in response to climate emergency and biodiversity collapse.

*"After more than 25 years of working and influencing the built environment, we have a duty to respond and drive change both in our operations and our projects. Reaching operational net-zero is a step in the right direction, and we are prepared to do much more."*

Marta Galiñanes-García, Group Director & Sustainability Champion



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akt II



## Building for the future: our approach to sustainability through design.

We know that as designers we play a critical role in effectively minimising the emission of carbon during the design process. As such, AKT II is committed to ensuring that on every project we target the lowest embodied carbon possible.

Our own in-house sustainability research group has produced a continually evolving Sustainability Charter which provides not only a framework of our core objectives and actions to achieve net-zero building design, but also how we must live our own lives and manage our own working environments. This includes measures like mandatory recycling, ethical sourcing of supplies and food, and an ongoing full carbon assessment of our daily working lives including transport and energy consumption.

We have summarised this approach to sustainable design within a unique circularity definition illustrating the imperative continuity of these following principles:

- **Endure** - design for future-proofing: Design adaptable, resilient structures for future needs, minimising demolition and ensuring longevity.
- **Reduce** - material and embodied carbon: Prioritise low-carbon materials by accurately calculating their lifecycle

impacts to balance sustainability with project goals. We have developed a bespoke in-house parametric tool which can calculate embodied carbon across various material combinations and building configurations.

- **Integrate**: Maximise material functionality, using properties like timber for well-being and sustainable systems to achieve more with less.
- **Make and Dismantle**: Utilise Design for Manufacturing and Assembly (DfMA) for efficient construction and easy future disassembly.
- **Learn** - use of data: Improve designs by analysing data from completed projects, aligning real performance with theoretical models.
- **Reuse** - adaptive reuse: Focus on adaptive reuse, rigorously assessing and repurposing existing structures to extend their lifecycle and minimise waste.

Many of our projects have won awards for their design, including Shrewsbury Flaxmill Maltings being awarded the RIBA Regional Conservation Award, Europa Nostra Award for Cultural Heritage (Conservation & Adaptive Reuse Category) and Brick Award for Sustainability in 2023.

As part of our environmental management system and processes, we measure our environmental carbon footprint each year and also take action to minimise where possible. The electricity we use in our headquarters comes from renewable sources. Our environmental management system is compliant with ISO 14001 and externally audited and certified by LRQA.

Our strategy is proactive, and we are working to minimise our impact, ensuring carbon reductions are taken where possible and as a last resort offset them.

## 1. Measure.

We measure and monitor our environmental and carbon data. So far our carbon data comprises of renewable electricity, gas (heating), water, printer consumption, waste, commuting, business travel and we estimate our staff's working-from-home emissions.

## 2. Act.

We continue to implement our climate emergency action plan to reduce our greenhouse gas emissions where possible.

## 3. Verify.

Our carbon data is verified independently by a third party.

## 4. Offset.

In the instances where we cannot reduce emissions we will offset via recognised offsetting schemes.

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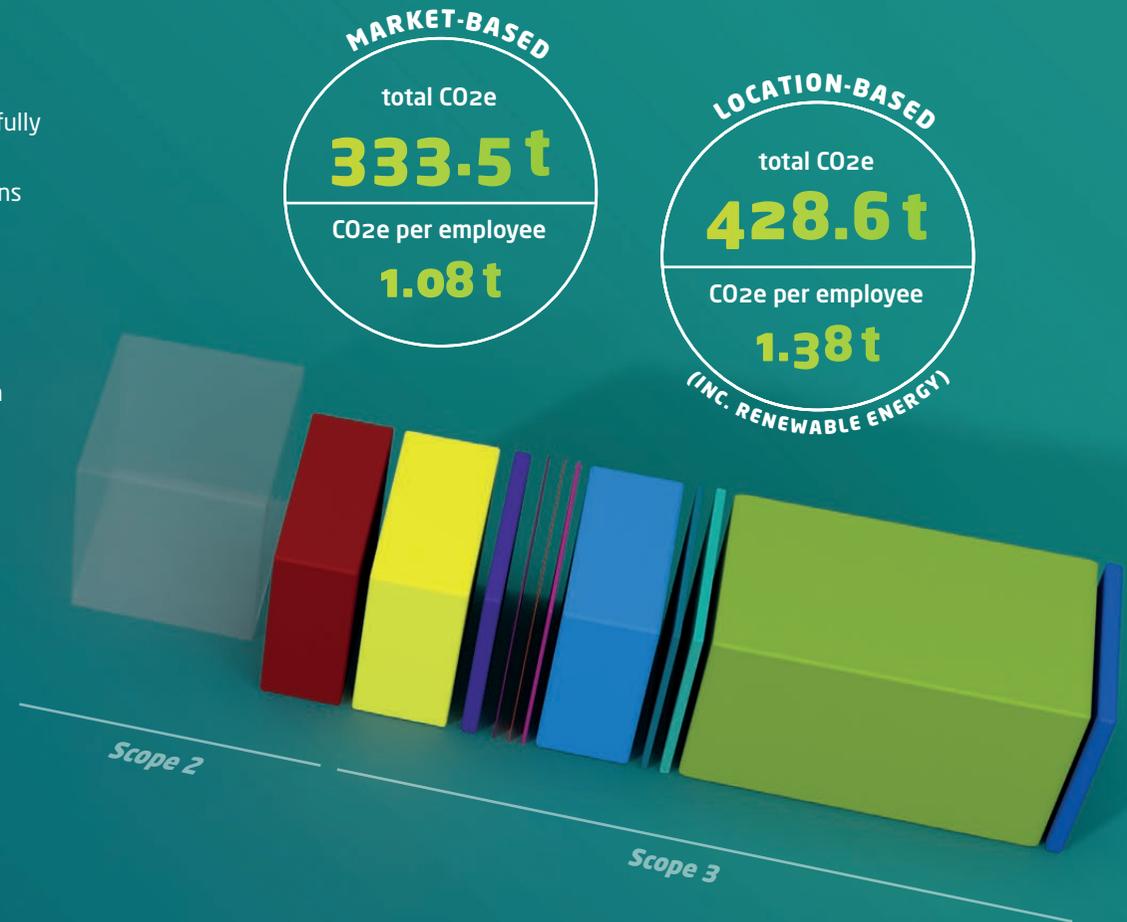
## Carbon use in 2023.

In 2023, we reduced our carbon emissions by 24% (market-based) compared to 2019, successfully achieving our proposed Science-Based Targets initiative (SBTi) goal (at least 16.8% reduction from the baseline). Specifically, scope 2 emissions were reduced by 51%, and scope 3 emissions decreased by 18% from the baseline year.

Our top 3 emissions contributors:

- Flights-related emissions are back to normal and intensified by the strategic business plan targeting international projects and the establishment of international offices. Flights remain the largest contributor, accounting for 52% of our total emissions. We achieved a 12% reduction in Flight emissions compared to the baseline year.
- Employee commuting related emissions which include both 'staff commuting' and 'working from home', account for 28%, since 2023 our hybrid working policy (3 office days) has been fully adopted by the practice.
- Our scope 2 market-based emissions, Gas (heating) accounted for 12% of our total emissions. It's important to note that gas usage fluctuates with the building's occupancy levels and not only our occupied space, which influence heating demands

The electricity (accounted for 22% - location based) in our HQ is fully backed by renewable electricity sources, this year, we invested in replacing desktops with laptops, this led to a 35% reduction in electricity consumption and a 36% decrease in carbon emissions (location based approach), aligning with our environmental goals and showcasing our commitment to sustainable technology.



**Electricity \***  
95.0 t CO<sub>2</sub>e  
Already renewable

**Electricity T & D losses**  
8.2 t CO<sub>2</sub>e  
2%

**Printing paper**  
2.0 t CO<sub>2</sub>e  
1%

**Commercial travel - train**  
4.7 t CO<sub>2</sub>e  
1%

**Gas (Heating)**  
40.8 t CO<sub>2</sub>e  
12%

**Water & waste water**  
0.8 t CO<sub>2</sub>e  
< 1%

**Staff commute \*\*\***  
45.8 t CO<sub>2</sub>e  
14%

**Commercial travel - flights**  
172.6 t CO<sub>2</sub>e  
52%

**Working from home**  
47.4 t CO<sub>2</sub>e  
14%

**Waste \*\***  
0.3 t CO<sub>2</sub>e  
< 1%

**Commercial travel - taxi, bus, car**  
3.1 t CO<sub>2</sub>e  
< 1%

**Regional offices \*\*\*\***  
8.0 t CO<sub>2</sub>e  
2%

\* Our headquarters are located in the White Collar Factory in London. The entire building's ecosystem is very sustainable and won several environmental awards.

Our landlord Derwent is committed to Net Zero by 2030. All our HQ's electricity use is from [renewable sources](#).

\*\* Only 32% of our waste is going to landfill.

\*\*\* Around 26% of our staff [cycle or walk](#) to the office.

\*\*\*\* Our regional offices, which house less than 5% of our staff, are located in fully serviced spaces. We estimated their carbon footprint by applying a carbon emission rate per person based on our HQ data.

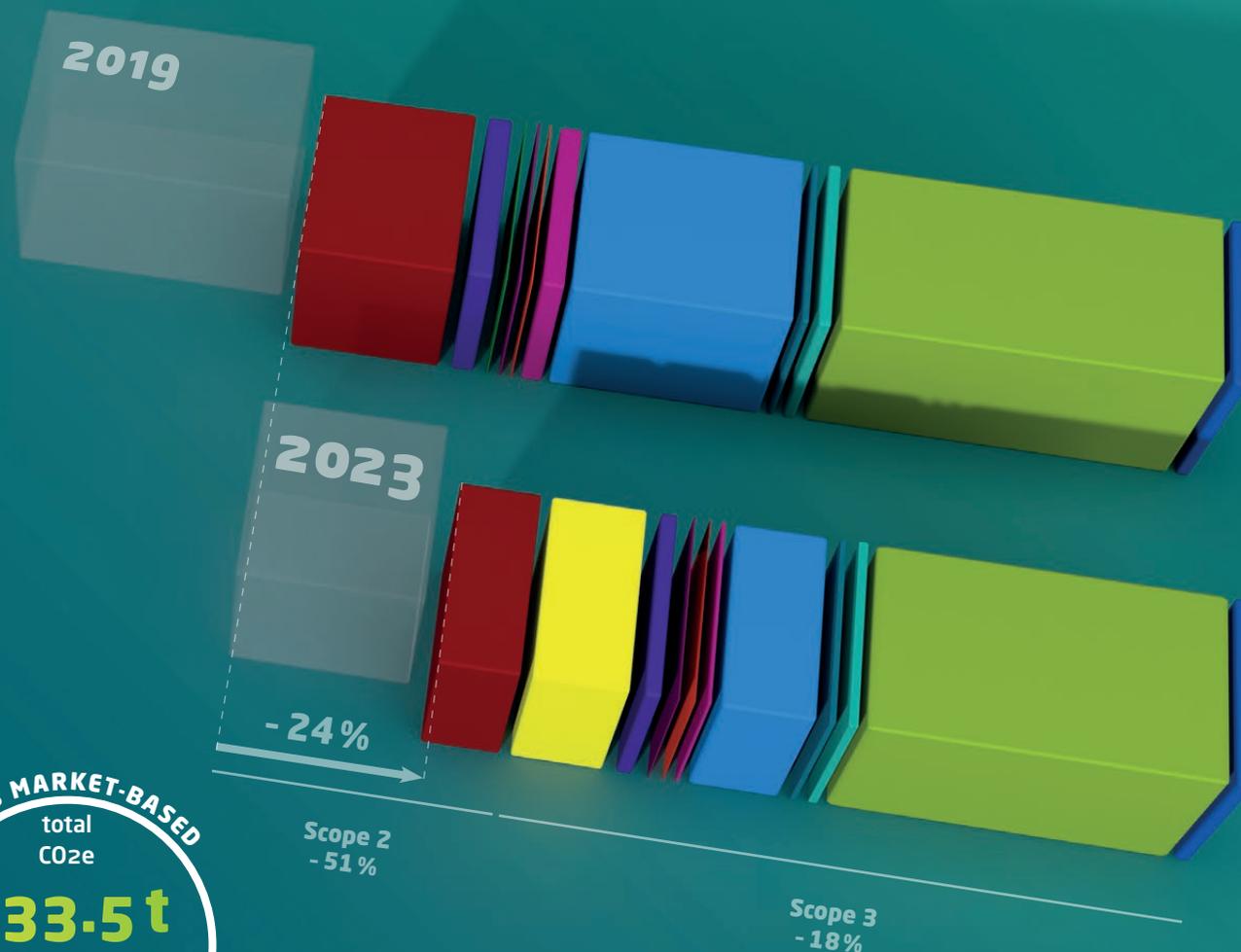
## Baseline vs. current year's analysis (2019-2023).

For chart key please see previous page.

We've achieved key substantial emission reductions across different areas including electricity, printing paper, waste, employee commuting.

- A 36% reduction from 'Renewable' electricity (location-based) by replacing desktops with laptops. This investment demonstrates our commitment to leveraging technology for positive environmental gains by reducing our carbon footprint
- An 83% drop in printing paper emissions due to reducing the number of printers in the office
- A 60% reduction in employee commuting emissions driven by hybrid working practices
- Significant decreases in waste and wastewater emissions by 45% and 67%, respectively.

Although business travel-related flight emissions were reduced only by 12%, there is still room for further improvement in this area.



## What we continue doing in 2024.

Our 2023 carbon data has been independently verified by a rigorous process from Carbon Footprint Ltd. We have taken further steps to offset more carbon emissions than what we emitted, achieving the **Carbon Neutral+** status. We are supporting the following verified offset projects: Zoba Anseba Community Safe Water Project in Eritrea (Gold Standard - Avoidance Project) and Reforestation of Degraded Land by Mtpl in India (Verified Carbon Standard - Removal Project). By doing so we are also contributing to the **UN Sustainable Development Goals** of Good Health and Wellbeing (3), Clean Water and Sanitation (6), Climate Action (13) and Life on Land (15).

During 2024, as we navigate challenges such as increased flight uptake due to international market expansion, we remain committed to managing our carbon footprint effectively. Our action plan focuses on maintaining our current measures and also aim to:

- continue using collaborative technology as an alternative to travel where possible, and to closely monitor our international flight intake
- review and optimise lighting systems across our office space
- engage further with our landlord to seek opportunity to further environmental initiatives in our head office
- improve our carbon data gathering process by collecting data more regularly
- continue enhancing our staff awareness through reminders

### Sustainable engineering: Our continuous action plan

- Our established in-house sustainability research group will continue to drive change through our involvement in the design of less resource hungry buildings and their surrounding infrastructure. This is where we can make the biggest impact - addressing material use, greenhouse gases and waste & water consumption across all live projects.
- Utilising our bespoke in-house carbon tools, we will continue working with contractors, suppliers and designers alike to push designs to address the climate emergency and minimise embodied carbon.
- Our infrastructure and bioclimatic teams endeavour to ensure that all projects not only maintain the local environment and conditions, but seek to improve and enhance biodiversity of the surrounding areas.
- Our aim is to ensure that on every project we work on we make a positive change to the local area both from a social and environmental perspective.
- We will further enhance the technical knowledge of our practice and our staff on topics related to sustainable design solutions and carbon efficiency of our projects.

Our determination to align the built environment, so future generations can thrive on a healthy planet, is top of our agenda.



## How we calculated our data.

All conversion factors used were extracted from the following sources:

### 2023

<https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2023>

File Name: Conversion-Factors-2023-Condensed-set v01.xlsx

Units: kg CO<sub>2</sub>e

### 2019

<https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2019>

File name: UK Government GHG Conversion Factors for Company Reporting Condensed Set 2019 v1.3

Units: kg CO<sub>2</sub>e



**Carbon Neutral**   
Organisation

Covering our emissions related to scope 2 - gas, 3.1 - paper & water, 3.3 - electricity T&D losses, 3.5 - waste & wastewater, 3.6 - flights, train, taxi, bus & car travel, 3.7 - staff commuting & homeworking, 3.8 - regional offices.