

CARBON REDUCTION REPORT

JANUARY 2025



CONTACT

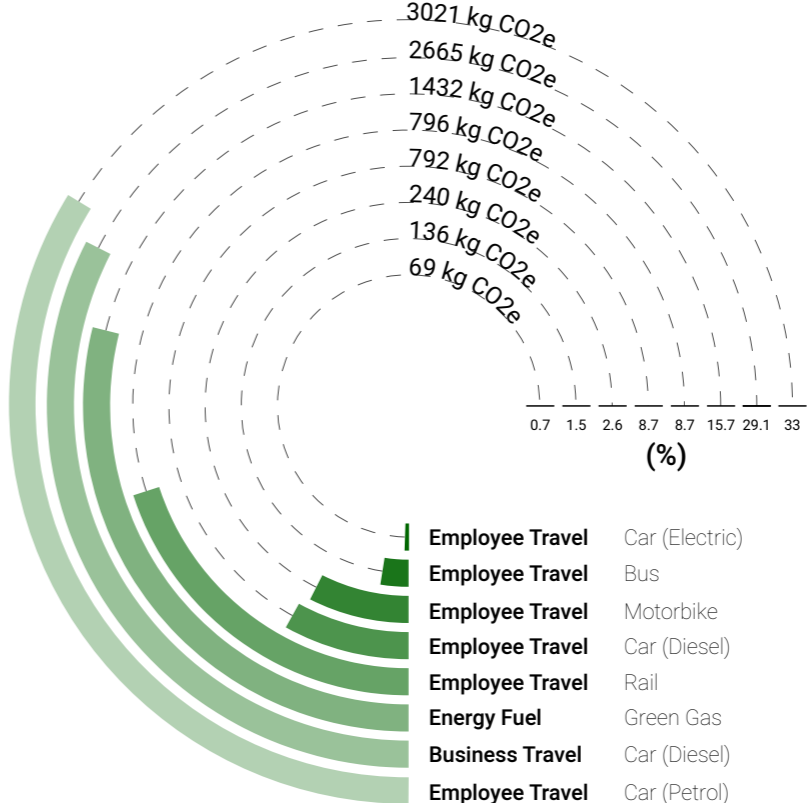
The Sustainability Team can be contacted at
sustainability@mastarchitects.co.uk



51 St Vincent Crescent,
Glasgow,
G3 8NQ
t: 0141 221 6834
e: mast@mastarchitects.co.uk
www.mastarchitects.co.uk

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INTRODUCTION

Sustainability is a core value at **MAST Architects**, and we are committed to helping our clients achieve their Net Zero Carbon goals. We do this through both energy-conscious design and the sustainable delivery of our consultancy services.

This document has been prepared by the **MAST Architects Carbon Reduction Team** to outline our internal carbon assessment and analysis process.

It provides an overview of our assessment methodology and carbon footprint, while identifying opportunities for both current and future improvements in the scope of our measurements and overall carbon impact.

Our approach is driven by our commitment to support and align with the goals of **Architects Declare**, a network of architectural practices dedicated to addressing the climate and biodiversity crises.

For additional details, please refer to **Appendix A**.

CARBON REPORTING SCOPE

We have been measuring and reporting our carbon footprint since 2021, allowing us to establish a baseline and set actionable interim targets to support our goal of achieving **Net Zero by 2045**. Our reporting has enabled us to identify the areas of our business that contribute most to our emissions and to implement targeted actions to reduce our impact. Appendix B includes a summary of the measures considered and implemented to date.

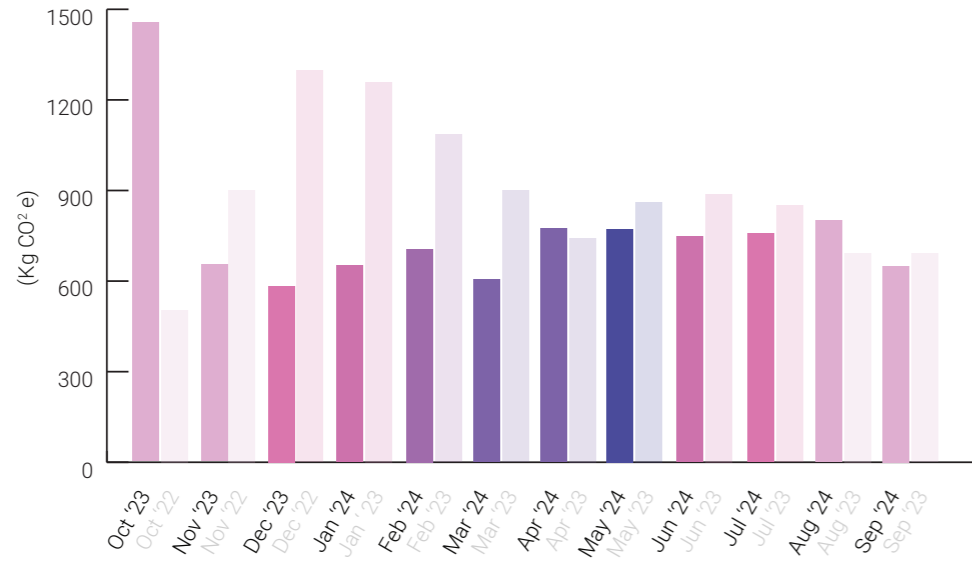
Currently, we measure the following emissions;

- **Scope 1 Emissions:** Direct emissions from heating our office building and use of company vehicles to attend in person meetings and site visits.
- **Scope 2 Emissions:** Indirect emissions from the purchased electricity used to power our office building.
- **Scope 3 Emissions:** Indirect emissions from employee commuting

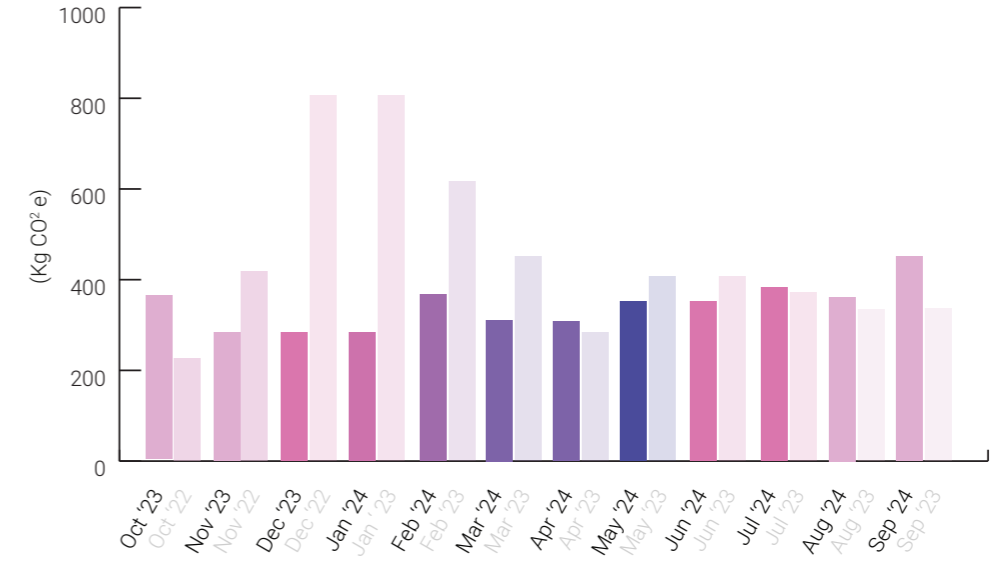
We measure our carbon footprint using **Notch** (formerly CBN Expert), which has enabled us to establish our baseline emissions for the period from October 2021 to September 2022. This baseline allows us to compare current emissions, assess the impact of the carbon-saving measures we've implemented, and identify areas for future improvement.

It is important to note that the emissions recorded in our baseline year were influenced by the COVID-19 pandemic. Our carbon reporting for 2022-2023 reflects the end of the pandemic, with the resumption of in-person activities, including a return to office-based work. Additionally, during this period, we experienced a significant increase in staff numbers.

TOTAL CARBON EMISSIONS



SCOPE 1 EMISSIONS



CARBON SUMMARY

In the 2023/2024 period, our total carbon emissions were **9,151 kgCO₂e**, reflecting a 14% reduction compared to the previous year. Despite fluctuations in the size of our practice, emissions per employee have decreased to **228 kgCO₂e**.

Notably, our emissions have returned to levels consistent with our baseline year, which was 9,143 kgCO₂e. This demonstrates the significant impact of the changes we have implemented to date. Even with the return to in-person work and meetings, we have managed to reduce emissions. A key achievement has been a 33% reduction in our scope 1 emissions from our baseline year.

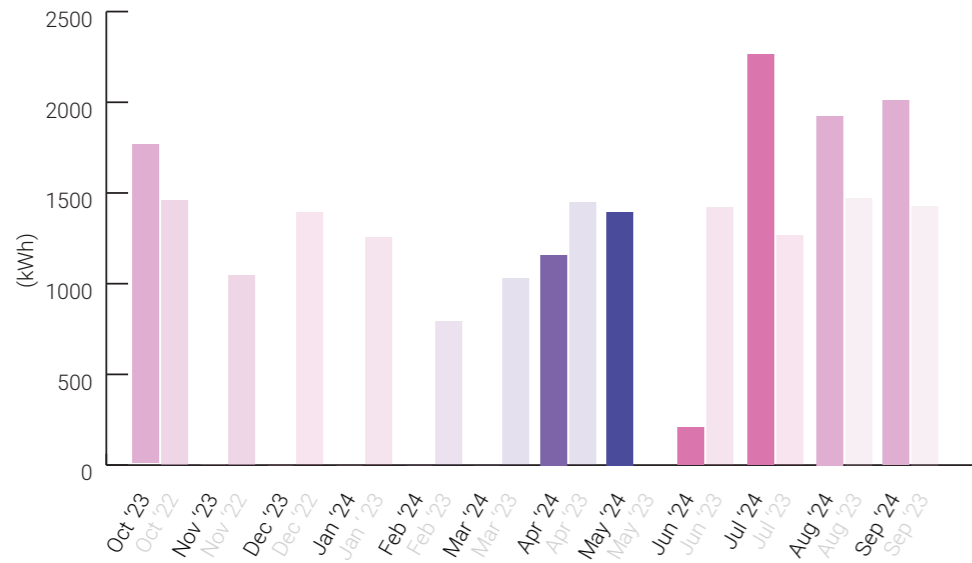
SCOPE 1 EMISSIONS

Our **Scope 1 Emissions** have **decreased by 56%** over the past year, primarily due to a significant reduction in emissions from gas used to heat our office. This is the direct result of the energy-saving measures we've implemented in previous years, including installing advanced heating controls and implementing an office heating policy, which are now yielding notable carbon benefits.

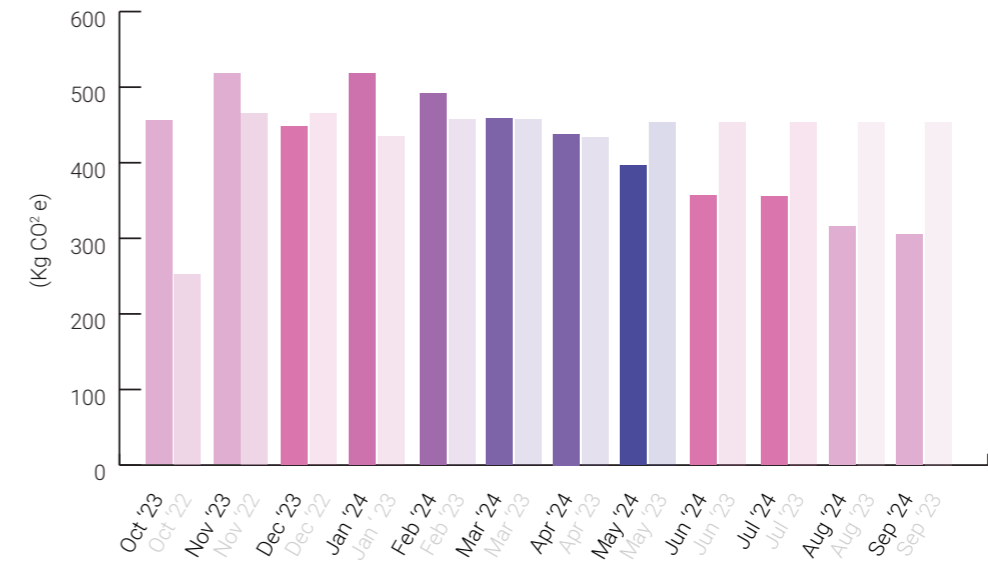
We have explored additional fabric improvement measures, such as secondary glazing and attic insulation, to further reduce our heating demand and gas consumption. In 2023 Business Energy Scotland Energy carried out an Efficiency Assessment on our behalf which included a cost benefit analysis of these measures. These measures are currently cost-prohibitive and we will not be implementing them at this time. We will, however, consider them in future business planning. For further information on the Business Energy Scotland Energy Efficiency Assessment refer to Appendix C.

Conversely, our scope 1 emissions from business travel have increased by 23% as in-person meetings became more common post-pandemic. Business travel now represents the second-largest source of our emissions. To address this, in December 2024, we replaced our two diesel company vehicles with a single hybrid electric vehicle.

ELECTRICAL ENERGY USE



SCOPE 3 EMISSIONS



SCOPE 2 EMISSIONS

In December 2021, we transitioned to a carbon-neutral energy supplier (Octopus Energy), effectively reducing our **Scope 2 Emissions** to zero.

We also recognize the broader benefits of reducing our electricity demand, including easing pressure on the electrical grid. Over the past few years we have implemented several energy saving measures including;

- Installing motion-activated light sensors in ancillary rooms
- Installing power-saving software on workstations
- Reducing the number of printing facilities

These measures continue to have an impact resulting in a **7%** reduction in our electrical energy consumption.

The Business Energy Scotland Energy Efficiency Assessment also included a cost benefit analysis of installing PV panels. Again this proved to be cost prohibitive, however, we will consider their installation in future business planning.

SCOPE 3 EMISSIONS

Our **Scope 3 Emissions**, primarily resulting from employee commuting, have decreased by **3.5%** compared to the previous year. However, due to a reduction in our workforce, this has led to an 11% increase in emissions per employee.

As employee commuting remains the largest contributor to our emissions, we will prioritize this area in the coming year. Our goal is to encourage employees to use active transportation and public transport for their commutes by offering incentives and exploring other sustainable options.

Additionally, we plan to expand our **Scope 3 Emissions** monitoring in the next year to include other sources, particularly emissions related to waste. By tracking and reporting on these emissions, we aim to further minimize our environmental impact.



CARBON OFFSET

While we are taking meaningful steps to reduce our carbon footprint, we acknowledge that achieving zero emissions is not yet feasible. For the past several years, we have been a **Silver Partner of Trees for Life**, a conservation charity that has planted nearly 2 million trees in the Caledonian Forest over the past 25 years.

This year, our donation of 200 trees will offset **4,000 kgCO₂e**, significantly reducing our carbon footprint. We will continue to partner with organizations like **Trees for Life** until we can achieve carbon neutrality.

CONCLUSION

We have made notable progress in reducing our carbon emissions, however, we recognize that the majority of these savings stem from reduced energy use in gas, and further improvements in this area will require significant investment. In the coming year, we will focus on reducing emissions in other high-impact areas, including business travel and employee commuting.

We are committed to developing a comprehensive carbon reduction plan this year, aiming to cut our carbon footprint by **90%** by **2040** and achieve **100%** reduction by **2045**. To guide us in this journey, we have set clear five-year targets, as outlined in Appendix D.



Business Travel
29.12% of Total
23.15% Increase

Energy
15.65% of Total
56.30% Decrease

Employee Commute
55.23% of Total
3.45% Decrease

Carbon Reduction by Category



APPENDIX A

Architects Declare is a network of architectural practices committed to addressing the climate and biodiversity emergency.

MAST Architects are committed to and support **Architects Declare** and will seek to:

- Raise awareness of the climate and biodiversity emergencies and the urgent need for action amongst our clients and supply chains.
- Advocate for faster change in our industry towards regenerative design practices and a higher Governmental funding priority to support this.
- Establish climate and biodiversity mitigation principles as the key measure of our industry's success: demonstrated through awards, prizes and listings.
- Share knowledge and research to that end on an open source basis.
- Evaluate all new projects against the aspiration to contribute positively to mitigating climate breakdown, and encourage our clients to adopt this approach.
- Upgrade existing buildings for extended use as a more carbon efficient alternative to demolition and new build whenever there is a viable choice.
- Include life cycle costing, whole life carbon modelling and post occupancy evaluation as part of our basic scope of work, to reduce both embodied and operational resource use.
- Adopt more regenerative design principles in our studios, with the aim of designing architecture and urbanism that goes beyond the standard of net zero carbon in use.
- Collaborate with engineers, contractors and clients to further reduce construction waste.
- Accelerate the shift to low embodied carbon materials in all our work.
- Minimise wasteful use of resources in architecture and urban planning, both in quantum and in detail.
- Support those who are working for climate justice and strive to ensure equity and an improved quality of life for all.

<https://www.architectsdeclare.com>

Initiative	Implemented	Date	Impact
Scope 1 Emissions			
Trial closure of the office on Monday's	Yes-temporarily	2022	Measure had very minimal impact as office remained open to key office based staff – measure was not continued
Installed advanced heating controls	Yes	2022	Reduced gas consumption and scope 2 emissions
Implemented Office Heating Policy	Yes	2022	Reduced gas consumption and scope 2 emissions
Implemented Virtual Meeting Policy	Yes	2023	Difficult to quantify as emissions were not measured pre-pandemic, however assume this has reduced emissions
Install loft insulation	No	2023	Cost benefit analysis was undertaken, however, costs were prohibitive
Install secondary glazing	No	2023	Cost benefit analysis was undertaken, however, costs were prohibitive
Replace business cars with hybrid electric vehicle	Yes	2024	Impact not yet know, will be reported on in 2024/25 carbon report

Initiative	Implemented	Date	Impact
Scope 2 Emissions			
Switched to carbon neutral energy supplier	Yes	2021	Reduced scope 2 emissions to zero
Installed motion-activated lights in ancillary rooms	Yes	2022	Reduced electrical energy consumption
Installed power-saving software on workstations	Yes	2022	Reduced electrical energy consumption
Reduced the number of printing facilities	Yes	2022	Reduced electrical energy consumption
Install PV panels	No	2023	Cost benefit analysis was undertaken, however, costs were prohibitive
Scope 3 Emissions			
Reduced office working days to 3	Yes	2022 - 2024	Difficult to quantify as emissions were not measured pre-pandemic, however assume this has reduced emissions
Increased office working days to 4	Yes	2025	To improve collaboration office working days has increased to 4, impact is not yet known but we assume this will increase emissions

APPENDIX B

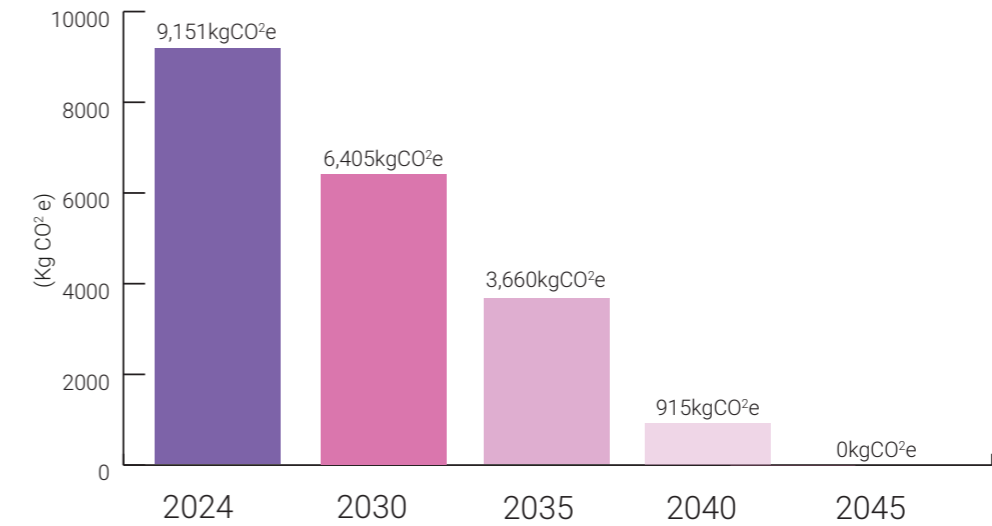
Since we began measuring and reporting our carbon footprint in 2021 we have considered and implemented a number of measure to reduce our emissions, summarised above.

APPENDIX B

RECOMMENDED OPPORTUNITIES

Description	Finance Estimates						Annual Environmental Saving Estimates	
	Annual Cost Savings	Annual Income Generated	Investment Required	Payback	Potential Grant	Payback with Grant	Energy	CO2e
	£ (ex. VAT)	£ (ex. VAT)	£ (ex. VAT)	Years	£	Years	kWh	Tonnes
Solar PV	1,752	201	11,826	6.1	0	6.1	6,046	1.4
Flat Roof Insulation	680	0	6,000	8.8	4,500	2.2	3,775	0.7
Secondary Glazing	350	0	21,000	60	0	60	1,900	0.4
Total	£ 2,782	£ 201	£ 38,826	-	-	-	11,721	2.5

CARBON REDUCTION TARGETS



APPENDIX C

The **Business Energy Scotland Energy Efficiency Assessment** identified the following measures which could be implemented and the associated reduction in CO₂ emissions annually;

- Solar PV 1400kgCO₂e
- Loft Insulation 700kgCO₂e
- Secondary Glazing 400 kgCO₂e

The report also provided an approximate cost for installation of each of the measures and in turn a payback period. Costs have proven prohibitive at this time, however, the information provided within the assessment will help guide future business planning.

APPENDIX D

We are committed to developing a comprehensive carbon reduction plan this year, aiming to cut our carbon footprint by **90%** by **2040** and achieve **100%** reduction by **2045**. To guide us in this journey, we have set clear five-year targets, as outlined in Appendix D.



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