rivingtonstreetstudio Carbon Reduction Report 2022



About Rivington Street Studio

Rivington Street Studio is an award-winning London architectural practice established in 1989, which specialises in the education and housing sectors. The practice has deep roots in sustainability delivering the first Passivhaus accredited school in the country in 2015. Since then, Rivington Street Studio has produced numerous projects that provide industry sustainability exemplars.

In 2022 Rivington Street Studio moved to an Employee Ownership Trust to ensure a sustainable future for the practice and its employees.

We are based in our office in East London.



rivingtonstreetstudio

Introduction

As a practice, we recognise that the most significant impact we can have on carbon emissions is through the design of our projects. We are Architects Declare signatories and in 2022 we committed to the RIBA 2030 Climate Challenge. We're now working towards RIBA's performance targets for the reduction of operational energy, embodied carbon and potable water on our projects.

We believe it is vitally important to measure and analyse our business carbon footprint each year, as a way of demonstrating our commitment towards net zero and increase carbon literacy within our team. We do this through the standardised global framework: The Greenhouse Gas (GHG) Protocol, and categorise business related emissions under three scopes. This year we added the final category to our scope measurements: purchased goods and services (such as groceries, office stationery, etc.).

This report is based on the calendar year January - December 2022.

The carbon footprint data in this report is based on information provided by the 29 staff who completed a survey in October 2022.



Embodied carbon calculations for Gordonstoun Classroom Hub, completed in 2023

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This year we measured our Scope 1 and Scope 2 emissions and the applicable upstream and downstream factors within Scope 3. We also measured everyone's personal footprints.

Why are we measuring carbon emissions in this way?
Standardised measurement tools – useful for benchmarking
Accurate – uses carbon conversion factors to calculate emissions
Facilitates the management and reduction of emissions

In 2022 we took direct action in improving carbon reduction measures and local air quality. RSS partnered with Trees for Streets and LB Tower Hamlets in sponsoring the planting of five new street trees within 5 minutes walk of the office.

We have started measuring and reporting carbon emissions based on a comprehensive global standardised framework known as the Greenhouse Gas (GHG) Protocol. The report categorises the direct and indirect emissions into three broad scopes:

Scope 1: Direct Emissions

Direct emissions are any GHG emissions from a company's owned or controlled sources. For example, emissions from company owned vehicles.

Scope 2: Indirect Emissions from purchased energy

This includes emissions from energy generated offsite and purchased by the business, i.e. electricity or gas used to power an office.

Scope 3: Indirect Emissions

Indirect emissions are GHG emissions from sources that are not owned or controlled by the business, but are part of its operation. This includes newly included purchased consumables and capital goods (such as emissions due to the manufacturing of IT equipment and mobile phones), business related travel (such as flights and buses to project sites, or staff commutes), courier transport, etc.

According to the US Environmental Protection Agency (EPA) Scope 3 emissions can be defined as "the result of activities from assets not owned or controlled by the reporting organisation, but that the organisation indirectly impacts in its value chain."

In this report we've measured various categories within Scopes 1 - 2, as well as increased measurement of upstream and downstream factors within Scope 3.

Our Results

	Category		Total	Carbon Factor (kg Co ₂ e)	Total kg Co ₂ e	Carbon Factor Reference	Carbon Footprint (tonnes Co ₂ e)	Carbon Footprint per person (tonnes CO ₂ e)
1	Fuel (Combustion)	Gas	0	N/A	0	N/A	0	0
2	Utilities	Electricity	22,509.6 kWh	0.21	5.08	UK electricity F24	5.08	0.175214294
		Water	1000 cubic metres	0.21	212.33	Water supply E18	0.07	0.002568966
3	Purchased goods & services	Paper					0.11	0.003737156
		Supplies					2.47068	0.085195862
	Capital Goods	iPhones, IT			1378.24		1.38	0.047525517
	Fuel and energy-relate (working from home)	ed activities: WFH			5450		5.45	0.189655172
	Business Travel	Taxi	1,776.9 km	0.17	301.71	WTT- pass vehs & travel- land F49	0.30171762	0.010404056
		Tube	9349.5 km	0.027	257.39	WTT- pass vehs & travel- land E86	0.257391735	0.008875577
		Bus	166.6 km	0.078	13.13	WTT- pass vehs & travel- land E76	0.013131412	0.000452807
		Train	4.965.13 km	0.035	174.27	WTT- pass vehs & travel- land E83	0.174276063	0.006009519
		Plane	7534.42 km	0.24	1842.54	WTT- business travel- air F20	1.842542411	0.063535945
		Carshare	203.6 km	0.17	34.57	WTT- pass vehs & travel- land F49	0.03457128	0.001192113
		Walk	850.51 km	0	0		0	0
		Bike	253.6 km	0	0		0	0
	Employee Commuting	Tube	269434.00 km	0.027	7417.51	WTT- pass vehs & travel- land E86	7.49295954	0.258377915
		Bus	7511.80 km	0.078	592.08	WTT- pass vehs & travel- land E76	0.596136702	0.020556438
		Train	191528.48 km	0.035	6797.345755	WTT- pass vehs & travel- land E83	6.797345755	0.234391233
	Downstream transport and distribution	Motorbike	53.25 km	0.03134	1.668855	WTT- pass vehs & travel- land E61	0.001668855	5.75467E-05
		Small van	73.22 km	0.05266	3.8557652	WTT- pass vehs & travel- land F49	0.003855765	0.000132957
			Т	otal tCO ₂ e		32.11		

Comparison to our baseline year of 2019



Carbon Footprint (tonnes)

* recorded for the first time in 2021

Total Carbon Footprint Breakdown



Employee footprints 2022

At the end of 2022 we repeated the annual survey of employee footprints using the WWF Footprint Calculator tool. The results showed that our average carbon footprint reduced to 9.7 tCO₂e, which is slightly above the UK average (9.5 tCO₂e) and well above the global average (6.3 tCO₂e) – but well down from 2021 (10.9 tCO₂e).

We ask all staff to complete this at the end of each year to:

- Encourage individuals to be aware of their environmental impacts and that limit their carbon footprint where possible
- Get a more accurate picture of our collective environmental impact
- Analyse the results and see if we're improving



Conclusions and key findings

This year our carbon footprint sits at just over 32 tonnes of CO_2e , which represents a slight decrease from 2021.

Reasons for fluctuations in our carbon footprint:

- As per the scope exercise table on pages 5-7, this year we are including data for additional Scope 3 categories, mainly including purchased goods and consumables (tea / coffee etc). Employee commutes (calculated using the distance-based method) still account for almost half of the total carbon emissions, with almost all employees now travelling to and from the office 3-5 times a week.
- Following the easing of government restrictions related to the Covid-19 outbreak, meetings and site visits are now more often in-person which has dramatically increased emissions related to business travel.
- Our office electricity bill has increased as the office is now occupied by a number of staff Monday-Friday (as opposed to only 1 or 2 staff in the office during some periods of national lockdown). Also facilitating Working from Home (WFH) via Remote Graphics Software (RGS) requires many PCs to remain switched on in the office while staff connect to them remotely from home. This has also contributed to increased electricity consumption in 2022 compared to 2021.

While overall our carbon footprint may have now fallen, (increasing included categories), it is important to acknowledge additional categories for which the carbon footprint information is being included and analyse where fluctuations may have arisen:

- Emissions due to staff WFH: during 2022 most staff had established flexible working (in most cases 1 or 2 days WFH per week) compared with WFH full-time in 2020.
- Inclusion of purchased goods does make a large difference to the carbon footprint. However in 2022 this has been averaged based on a typical month. A month by month analysis will be included for in 2023.

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- Capital goods reduced significantly (IT equipment and mobile phones): Unlike in 2020 & 2021 when we bought unusual amounts of IT equipment to facilitate home working, in 2022 we didn't need many items (though some older/faulty PCs and mobile phones were replaced).
- Having reviewed electricity consumption with our IT team our servers are being replaced to more energy efficient models. This may raise IT purchase emissions, but reduce consumption emissions.

Reduction in carbon factors for calculating total CO_2e (namely due to the UK phasing out coal as a source of energy, moving towards renewable sources) has lead to a reduction in the carbon footprints across many categories.

As noted last year, it is hard to make comparison with recent reports due to the changing nature of our office life during and post-Covid. However, we will continue to review and investigate the negative environmental consequences of WFH to better mitigate its impact.

As we did the previous year, we asked all RSS staff to complete the WWF carbon footprint questionnaire for the year 2022. Compiling and analysing the results from we've found that, on average, our employee footprinting shows we are slightly above that of a typical UK citizen – but down again from our average in 2021.

'Travel' which covers personal and public transport usage for leisure and work, and flights, accounted for 30% of total staff carbon emissions. The second largest contributing factor was 'Stuff', which covers the purchases of consumable items. In 2022 we will continue to encourage staff to consume and travel mindfully and monitor their individual environmental impacts, as well as that of the office as a whole.

It is worth noting that RSS encourages cycling and walking to the office whenever possible.



Next steps

Our long-term ambition is to move to 100% renewable energy supplies for our office electricity. We will also look into metering our water bills, to better understand our water consumption and aim to reduce it where possible.

We will continue to investigate the impact of the Covid-19 pandemic on our carbon emissions, specifically with regard to transport and commuting, and challenge ourselves to find the most energy efficient working practices.

In addition to the further Scope 3 emissions identified this year (table overleaf), in our 2023 report we will be adding detail to figures for carbon emissions relating to purchased goods / services and waste disposal / treatment of products. Once we have assessed our current carbon footprint for these categories, we will aim to source more environmentally friendly options.

Commuter travel calculations will also be reviewed in 2023, as we have identified a potential overlap / double counting within WFH assessments.

As we move to a more standardised report using the GHG Protocols scopes and definitions, we will continue to measure more scope categories year-on-year. Only a few items within Scopes 1-3 were being measured in 2019: purchased electricity, capital goods (e.g. IT, mobile phones, etc.). Emissions relating to working from home and staff carbon footprints were added in 2020. In 2022 we have added yet more data to the report: purchased goods, emissions relating to employee commutes and courier transport (for documents or samples). In 2023's report we will include purchased goods and services on a month-by-month basis. While this has given us somewhat inaccurate year-on-year comparisons it is important we phase in a more in-depth record of GHG emissions resulting from our business operations. In our next annual report we will be analysing data from a range of items within scopes 2 and 3 and use the new baseline year as 2022, to make further changes and reductions.

We are a carbon neutral company. Our main goal is to reduce our emissions; where this cannot be done, we offset via an accredited offsetting solution.

In addition to considering our own environmental impact, social sustainability is a key part of our business. We provide an active Social Value programme, with project-specific initiatives. This is multi-faceted and includes apprenticeships, work experience, charities, education partnerships, our supply chain and professional support – and in all instances encourages others to consider their environmental impact.

As architects, we encourage all clients to seek the highest standards of sustainability for their projects and work closely to help meet them; targets include overall carbon footprint as well as including specific targets for recycling, waste, travel and transport, water consumption etc. Throughout any project we regularly meet our clients to report against carbon reduction. We try and maintain our involvement with the projects after completion and to obtain information about energy in use to ensure a feedback loop.

Scope of Carbon footprinting exercise

	2019 (Baseline)	2020	2021	2022	co
Scope 1					
Fuel Combustion	n/a	n/a	n/a	n/a	
Scope 2					
Purchased electricity/ heat					
Location based	Yes	Yes	Yes	Yes	
Market based				Yes (100% renewable)	
Scope 3 (upstream)					
3.1 Purchased goods and services (coffee, hotels, food and drink, milk, sandwiches, printing paper, alcohol, water, tea, laundry)				Yes	
3.2 Capital goods (IT equip, phones, fitout and refurb)	Yes	Yes	Yes	Yes	
3.3 Fuel and energy-related activities Work from home energy	n/a	Yes	Yes	Yes	
3.4 Upstream transportation and distribution	n/a	n/a	n/a	n/a	
3.5 Waste generated in operations (amount of recycling and landfill waste)				Yes	
3.6 Business travel (flights, train, bus etc)	Yes	Yes	Yes	Yes	
3.7 Employee commuting (Based on a typical week)			Yes	Yes	
3.8 Upstream leased assets	n/a	n/a	n/a	n/a	
Scope 3 (downstream)					
Downstream transport and distribution (couriers)			Yes	Yes	
Processing of sold products	n/a	n/a	n/a	n/a	
End-of-life treatment of sold products	n/a	n/a	n/a	n/a	
Waste disposal and treatment of products	n/a	n/a	n/a	n/a	
Downstream Leased assets	n/a	n/a	n/a	n/a	
Operation of franchises	n/a	n/a	n/a	n/a	
Operation of Investments	n/a	n/a	n/a	n/a	
Employee footprints					
All staff WWF footprints		Yes	Yes	Yes	

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