

# ARC:CDM



## Commute Offsetting

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This document was compiled to provide an overview of our carbon footprint and offsetting projects.

## Document Approval:

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1	Report of projects chosen as offsetting scheme	22/05/24



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## Introduction

As part of our commitment to improve our environmental impact and help achieve Net Zero, we measure aspects of the business which directly affect sustainability. We will always strive to reduce our environmental impact rather than offset, but some aspects of the business are not feasible to eliminate at this time. One prime area where our business continues to contribute to global GHG is our travel into and out of the office. This has been reduced over the last two years, with flexi working introduced, but our Team still work in the office three times per week. We have therefore compiled information on everyone's standard commute in order to calculate the average carbon tonnage over a 12 month period.

## The maths

The below chart is taken from Transport For London. It shows the various carbon amounts produced per passenger on a variety of public transports methods. We have used this data to calculate the average amount of carbon each of our Team is producing by taking a return journey into our Moreland Street offices. For example, those who get on a tube will use 41 grams of carbon per km travelled.

	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
CO <sub>2</sub> e emissions (tonnes) - TfL public transport services	1,442,090	1,545,548	1,562,242	1,615,774	1,540,956	1,434,681	1,305,584	1,145,784	1,039,937	861,873	831,624
London Underground grams per passenger km	44	38	36	43	35	34	35	30	28	115	41
Bus Operations grams per passenger km	75	81	77	76	75	74	85	83	80	177	99
Docklands Light Railway grams per passenger km	-	-	-	-	-	47	40	30	28	70	33
London Tramlink grams per passenger km	-	-	-	6	6	5	6	4	32	52	30
London Overground grams per passenger km	58	59	56	57	54	47	40	30	27	53	29
TfL Rail grams per passenger km	39	32	42	50	56	95	42	33	10	19	12

We then used an average of a 3 day week in the office across the business to come to a figure for us to off-set against. The overall calculations for our Team are as follows:

Total Team Grams Per Day	Office Tonne Per day	Office 3 day week (Tonne)	Monthly Ave (Tonne)	Annual Ave (Tonne)
44104	0.04	0.12 Tonne	0.48	5.76



## Off-Setting

Having established our commutes equate to circa 6 tonne of carbon per annum, we now have a figure we can offset against. We are delighted to have sourced an offsetting scheme which is Verra Verified Carbon Standard and compliant with ISO 14065 – 5D Net Zero. They are a very good match for ARC:MC as they support projects similar to that which we deliver plus they contribute directly to the UN SDGs. They do this with an aim to ‘..develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being,’ (sdgs.un.org). The projects we are now supporting through 5D Net Zero vary in location and end product but many are working towards developing renewable energies and innovative technologies, similar to those we come across on a daily basis working in the DC market. The following sections go into more detail around the projects we have chosen to support and in turn offset the 6 tonne of carbon our commutes produce.

## Hydroelectric, India

This project generates electricity through hydro power, utilising the potential of the Sutlej River. With a capacity of 1000 MW, the run-of-the-river hydro power plant is located between Karcham and Wangtoo in the Kinnaur district of Himachal Pradesh. The generated electricity is integrated into the NEWNE grid, contributing to the reduction of greenhouse gas emissions by replacing energy from fossil fuel-intensive thermal power plants. For more information visit <https://www.5dnetzero.co.uk/product/hydroelectric-project/>





## Household Biogas, India

This household biogas carbon offset project seeks to replace the prevalent and inefficient wood-fired mud stoves with clean, sustainable, and efficient biogas technology. 13,549 household biogas plants (also known as biodigesters) have been distributed around Uttarakhand province, India. This project will avoid 53,673 metric tons of CO<sub>2</sub>e per year while improving indoor air quality, hygienic conditions, and soil productivity. For more information visit <https://www.5dnetzero.co.uk/product/household-biogas-carbon-offset-project-india/>



## Wind Power, India

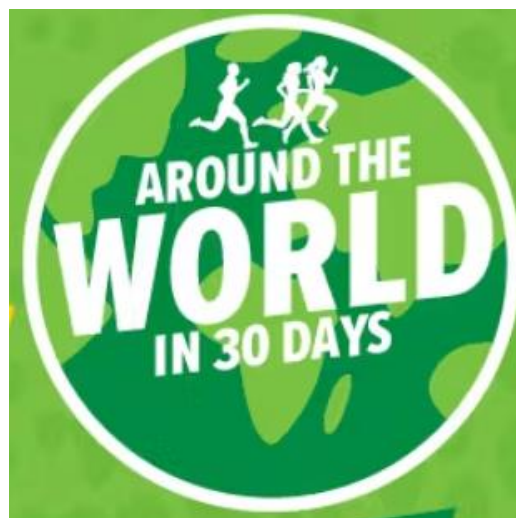
This wind power carbon offset project is a 100MW initiative in the State of Gujarat, India. The project aims to displace 183,960 MWh per year of electricity from the currently fossil-fuel-reliant Indian grid. The main purpose of this wind power carbon offset project is to generate clean electricity through renewable wind energy. This electricity will be fed to the Indian grid, diversifying the current fossil-fuel-heavy mix. The annual GHG emissions reduction is estimated at 172,333 tCO<sub>2</sub>e. Apart from providing clean energy, the project will also have a positive impact on the local economy. It is expected to create job opportunities, provide infrastructure development and stimulate economic growth in the region. For more information visit <https://www.5dnetzero.co.uk/product/wind-power-carbon-offset-project/>





## Conclusions

We are very excited to be contributing to these innovative projects, working towards reducing Global GHGs and improving infrastructure in countries which need it the most. However we would always rather our team did not produce the carbon at all. It would be ideal to have everyone walk or cycle their entire commutes, reducing the need to offset, but we understand this is not always feasible. So at ARC:MC we continue to encourage the use of our feet and legs as much as we can. We have been part of the Bike2Work scheme since 2022 and take part in fitness challenges and events, such as StructureTone's Demelza 10k Walk and The Zoological Society London's 'Around the World in 30 days'. The latter is being done in June 2024 with an aim to get the team moving daily to help raise funds for environmental initiatives helping to end wildlife extinction. So we have an on-going focus on keeping fit, supporting charities and using our feet as our chosen mode of transport as much as we can!



Sources of Info:

<https://www.bike2workscheme.co.uk/>

<https://content.tfl.gov.uk/tfl-corporate-environment-plan-29-september-2021-acc.pdf>

<https://www.greenpeace.org.uk/news/the-biggest-problem-with-carbon-offsetting-is-that-it-doesnt-really-work/>

<https://stobuildinggroup.com/london-united-kingdom/structure-tone-charity-sportive-2023/>

<https://aroundtheworld.zsl.org/teams/arcmc-zsl-2024>

