



## CARBON POSITIVE 2018 APPROACH OVERVIEW

IN MAY 2016, THE BERKELEY GROUP COMMITTED TO REDUCE OPERATIONAL CARBON EMISSIONS INTENSITY BY 10% AND TO INTRODUCE A PROGRAMME TO BECOME CARBON POSITIVE. WE ARE DELIGHTED TO HAVE ACHIEVED THIS IN 2018 BY DECREASING OUR OPERATIONAL CARBON EMISSIONS BY 22%<sup>1</sup> AND OFFSETTING MORE THAN OUR REMAINING EMISSIONS.

### BACKGROUND

The Berkeley Group's primary aim is to reduce the carbon emitted through our use of energy. We look to become more efficient in the way we consume energy across our business activities including on our development sites, in offices, and in sales and marketing suites.

During 2016-2018, we have increased our understanding of energy consumption across our day-to-day activities and issued guidance on how to address out-of-hours electricity consumption together with minimum recommendations for site set up and operation.

All sites now complete a Carbon Management and Action Plan to detail energy consumption and efficiency measures and many have retrofitted more energy efficient measures or are including these from site start. The use of energy from renewable sources has also been encouraged, either through the purchase of renewable energy tariff supplies or on-site generation.

The Berkeley Group's greenhouse gas (GHG) emissions in 2018 were 25,465 tCO<sub>2</sub>e, based on our operational boundary (please refer to the Annual Report 2018 GHG Emissions Supporting Information available [here](#) for details on the methodology adopted to calculate emissions). Approximately 21% of Berkeley Group emissions this year resulted from activities at Southall Waterside, where one-off remediation hospital and concrete batching activities occurred. When including emissions from these one-off activities, absolute emissions reduced by 12% and emissions per person reduced by 5% compared to 2016. Excluding Southall Waterside emissions (which are not considered consistent with our usual activities and therefore do not enable comparability to emissions in prior and subsequent years), our efforts led to a 22% reduction in operational carbon emissions per person across our activities in 2018 compared to our baseline in 2016.

We recognise that the continued and significant reduction of our emissions through changes in behaviours, procedures and technology will be an ongoing process over a number of years. We therefore committed in 2016 to implement a programme to become Carbon Positive, offsetting more than our remaining emissions. Our approach in 2018 is detailed on the following pages.

<sup>1</sup> This figure excludes Southall Waterside due to one-off remediation activities in the year.



## 2018 CARBON POSITIVE APPROACH

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- **Purchased UK electricity (7,551 tCO<sub>2</sub>e):** retired 25,102 Deep Green Renewable Energy Guarantee of Origins (REGOS) from hydro, wind and solar photovoltaic projects based in the UK. This is more than our consumption of purchased UK electricity at 21,480 MWh in 2018.
- **Purchased fuel (directly and via contractors); business travel; purchased heat; purchased international electricity; transmission and distribution losses of purchased electricity (UK and international) and heat; and upstream emissions (17,914 tCO<sub>2</sub>e):** offset 20,000 tCO<sub>2</sub>e through verified projects which are closely aligned to the Berkeley Group's business activities, key areas of focus within the Our Vision business strategy and/or the Sustainable Development Goals (SDGs) which have been identified by the Berkeley Group as the business having the most material ability to influence. These offset projects are as follows:
  - Barbosa Ceramic Fuel Switching Project in Brazil (7,000 tCO<sub>2</sub>e) – project focused on improving biodiversity through innovation in the ceramics industry in Brazil, along with local employee development. This project has been selected as it is industry related and aligns to the Berkeley Group's own commitments under Our Vision on biodiversity and employee wellbeing and training.
  - Madre de Dios REDD Project in Peru (7,000 tCO<sub>2</sub>e) - project focused on the protection and enrichment of communities, flora and fauna in the Peruvian Amazon. This project has been selected as it aligns to the Berkeley Group's own commitment under Our Vision to ensure there is a net biodiversity gain on the developments we create and has a focus on SDG 15: Life on Land.
  - Darfur Low-Smoke Stoves in Sudan (3,500 tCO<sub>2</sub>e) – project focused on reducing indoor air pollution and empowering women and low-income households through low-smoke cookstoves. This project has been selected as it aligns to the Berkeley Group's own commitment under Our Vision to contribute to the wellbeing of our customers through safe and healthy homes, and has a focus on SDG 3: Good Health and Well-being.
  - Wind Power Generation in India (2,500 tCO<sub>2</sub>e) – project focused on improving renewable energy supplies in India. This project has been selected as it has a focus on SDG 7: Affordable and Clean Energy, aligning to an SDG selected by the Berkeley Group to take action on.

Further detail on these projects can be found on pages 3 and 4.

## FUTURE APPROACH

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In 2018, offset projects supported by the Berkeley Group have been internationally based due to a lack of verified UK-based projects. We will be further reviewing and evolving our Carbon Positive approach in the coming years to look to increase focus on UK-based projects that benefit the communities in which we work.

## BARBOSA CERAMIC FUEL SWITCHING PROJECT, BRAZIL

By purchasing 7,000 carbon credits, the Berkeley Group has helped to preserve 29 hectares of native rainforest from being logged and used as fuel in the ceramic brick-making industry.

Barbosa Ceramic is a small industry that produces ceramic bricks in the north-east of Brazil. Prior to this project, native wood was used to fire the ceramics units which was fuelling deforestation of the Amazon forest, areas of diverse flora and fauna were at risk of disappearing, along with a valuable carbon sink being lost.

New kilns have been installed that substitute wood fuel with sawdust, açai fruit pits and other renewable types of biomass, resulting in a reduction in deforestation as well as GHG emissions, along with the creation of new markets for biomass suppliers. The project has also invested in workforce well-being and awareness raising of sustainable forest management.



## MADRE DE DIOS REDD PROJECT, PERU

By purchasing 7,000 carbon credits, the Berkeley Group has helped to preserve 113 hectares of Amazon forest from deforestation, protecting over 330,000 tropical trees in danger of extinction.

In the heart of the Vilcababna-Amboró conservation Corridor area, close to the ancient Inca city of Machu Picchu, the construction of an inter-oceanic road uniting Brazil with Peru jeopardises the tropical rainforest and one of the world's biodiversity hotspots.

This project increases surveillance in the area and establishes sustainable forest management in the certified timber concessions. This will dramatically reduce deforestation and the threat of moving communities and illegal logging anticipated with the new road.

In addition to combating climate change, preserving the rainforest results in the protection of 35 endangered species and 2 native communities (Yine and Huitoto) who rely on the forest for their survival. Employment and economic growth for local communities is also supported, through more than 470 jobs created where all employees of the scheme are to be Peruvians, with 70% local to the area.



## DARFUR LOW-SMOKE STOVES, SUDAN

By purchasing 3,500 carbon credits, the Berkeley Group is helping to improve household health and incomes in rural Sudan by installing over 700 low-smoke stoves.

In Darfur, Sudan, many women and children in households are exposed to indoor air pollution through traditional cooking methods of burning wood and charcoal inside the home. Burning these fuels releases large amounts of carbon monoxide and other pollutants, where long term exposure contributes to acute respiratory infections and other ailments. In Sudan, nearly 15,000 deaths per year are attributable to indoor air pollution.

This project promotes cleaner fuel use and improves household health by replacing traditional cooking methods with low-smoke LPG stoves. It is run by Sudanese women from local community associations, and aims to empower women by enabling them time savings from reduced cooking time with LPG stoves. LPG is also a less expensive source of energy, making it more accessible to low-income families to use.



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## WIND POWER GENERATION, INDIA

With a growing population and aims to further economic growth and raise living standards of those still in poverty in India, there is an increase in energy demand. Hence, there is a need for affordable energy, doubled with the imperative to reduce reliance on fossil fuels where currently this accounts for 70% of India's electricity generation.

This project aims to close the supply-demand energy gap that currently exists in India by generating electricity from a renewable source and supplying it to the state grid. It also provides opportunities for employment in the local community, works towards improving living standards and raises awareness of the impacts of climate change.



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