



Carbon Reduction Plan Carbon Footprint Report

for

Fairtrade Vending Ltd

Baseline year - 01.01.24 to 31.12.24



Authored by Paul Brown on 14th February 2025



Introduction

Project Background

Government funding has been received to assist SMEs in Medway to receive decarbonisation advice.

This advice includes:

- The delivery of a carbon footprint audit and production of an associated carbon footprint report (Scope 1 & 2 only)
- Information about the Government's net zero strategy and direction of travel relevant to the SME environment
- Advice and tips on how to reduce carbon emissions
- Information and advice on carbon offsetting for those 'hard to reach' residual carbon emissions which cannot be realistically reduced by other means
- Encouragement to sign up to the Government's SME Climate Commitment

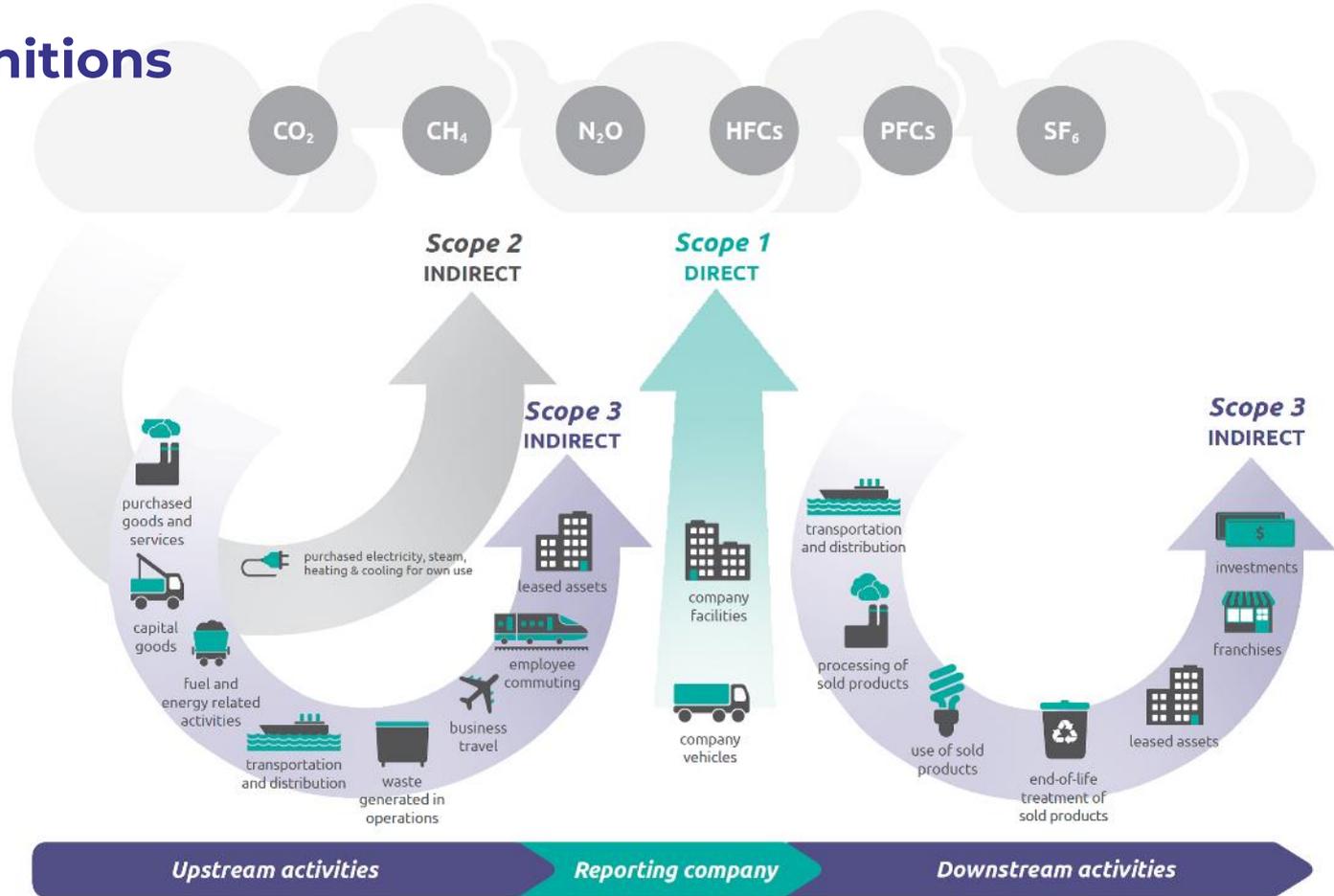
Methodology

Depending on the SMEs preference, contact was made by the Decarbonisation Adviser via either a personal visit to their business premises or via an online meeting. At the initial meeting, it was explained what information and data would be needed to calculate the SMEs Scope 1 and 2 emissions. This was based on how the business operates and this was all explored in the initial meeting.

A Baseline Year for calculating carbon emissions was agreed based on the circumstances of the business in question 01.01.24 to 31.12.24 year was used unless there was a specific reason why this was not a representative year for the business).

Carbon emissions were calculated based on the GHG (Greenhouse Gas) protocol accounting standards. Conversion factors used are the UK Government published factors for the year in question. Carbon emissions are illustrated in the format 'tCO₂e' (tonnes of carbon dioxide equivalent). For purchased electricity, the 'location based' method was used to calculate emissions unless the SME was self-generating their own electricity on site.

Scope definitions



Approach for Fairtrade Vending

Fairtrade Vending has over 30 years of experience in renting and selling tea and coffee vending machines, as well as providing related services and supplies to London, Kent, and throughout the South East. They specialise in serving the healthcare and education sectors, boasting extensive experience with hospitals, surgeries, schools, colleges, and universities.

The FAIRTRADE Mark is an independent consumer label that appears on products as a guarantee that disadvantaged producers receive a better deal. It ensures that farmers in developing countries receive a fair price for their products, covering the costs of sustainable production. This stable pricing enables them to plan for their future.

The rules and practices of international trade often favour rich countries and powerful companies, often at the expense of impoverished producers.



The Premises

The company operates from a steel-clad building, constructed in the 1980s with a steel-cladded roof.

Layout

The ground floor comprises a reception, showroom, storage and engineer's workshop.

The first floor comprises offices, WCs and storage.



This report provides an overview of Fairtrade Vending, emphasising its capabilities and the facilities.



Utilities Report

The building is equipped with mains electricity for its energy needs.

Heating

There are wall-mounted electric storage radiators and free-standing electric radiators in the office areas. There is no heating elsewhere in the building. There is a small electric boiler for hot water provision.

Lighting

The building is illuminated by LED lighting throughout.

Insulation

Ceiling tiles are present throughout the building, but there is no insulation in the ceiling cavities. It is not known if there is any cavity wall filler.

Glazing

The premises has recently completed an upgrade to double glazed throughout.

Vehicles

There are five company registered, diesel fuelled vehicles.

Special Equipment

There is no special equipment of note.

Summary

This report outlines the utility provisions within the building, including vehicle fuel consumption, heating, lighting, insulation, and glazing. It is important to note that ongoing efforts are being made to improve the lighting and insulation, ensuring the building's efficiency and comfort.

Figure for electricity and diesel consumption for Fairtrade Vending have been obtained.

Electricity – 11,268 kWh per annum

Diesel – 24,787 miles per annum

Water - 32 m³ per annum

Cardboard waste – 4 tonnes per annum

The baseline year of 01.01.2024 to 31.12.2024 will be used to calculate the carbon footprint. The 2023 GHG conversion factors are applied to the calculation.



Company Vehicles

| Vehicle Registration Number | Vehicle Type | Vehicle Make | Vehicle Model | Engine Type | cc | Max Payload Kg | Annual Mileage | Conversion Factor | tCO2e |
|-----------------------------|--------------|--------------|-----------------|-------------|--------------|----------------|----------------|-------------------|--------------|
| LB61 NVF | Car | Kia | Pro ceed | Diesel | 1582 | N/A | 22289 | 0.26902 | 6.00 |
| SL21 XGC | Car | Hyundai | Tucson SE | Petrol | 1598 | N/A | 2498 | 0.28676 | 0.72 |
| GF08 HZN | Van | Vauxhall | Vivaro PV | Diesel | 1995 | 1063 | 8004 | 0.9 | 7.20 |
| WM66 YML | Van | Ford | Transit Connect | Diesel | 1499 | 580 | 8107 | 0.9 | 7.30 |
| KO19 HYK | Van | Vauxhall | Vivaro 2700 | Diesel | 1598 | 1075 | 11809 | 0.26902 | 3.18 |
| | | | | | Total | | 24787 | | 24.40 |

Carbon footprint details for 01.01.23 to 31.12.23

| Emission Scope | Type | Units/Miles | Conversion factor | tCO2e |
|----------------|---|-------------------|-------------------|-------|
| 1 | Company Vehicles (5) | 24,787 miles | See page 9 | 23.25 |
| 2 | Electricity consumption | 11,268 kWh | 0.207074 | 2.18 |
| 3 | Cardboard waste (see page 12 for details) | 4 tonnes | 21.280 | 0.09 |
| 3 | Water consumption | 32 m ³ | 0.177 | 0.01 |

From this calculation, we can confirm that Fairtrade Vending has a Scope 1 and 2 carbon footprint of 25.68 tCO2e for the year 01.01.24 to 31.12.24

tCO2e = 25.68



Carbon Reduction Initiatives

- **Transition to Electric Vehicles:** Over the course of the next five years, Fairtrade are phasing out all remaining diesel vehicles and replacing them with electric vehicles (EVs). This strategic shift not only aligns with environmental goals but also supports the adoption of cleaner and more sustainable transportation options.
- **Window Upgrade to Double Glazing:** The replacement of single-glazed windows with double glazing has been completed. This upgrade enhances energy efficiency within the facilities and contributes to the reduction of heat loss, thereby minimising energy consumption.
- **Energy-efficient Equipment Replacement:** A cornerstone of Fairtrade's strategy is to prioritise energy efficiency during equipment replacements. By sourcing replacements with the highest energy efficiency rating possible, we ensure that energy consumption is minimised over the entire lifecycle of the equipment.
- **Optimised Electric Heating:** The implementation of thermostatically controlled electric heaters ensures that indoor temperatures are maintained at an energy-efficient level of approximately 19 degrees Celsius. This temperature regulation contributes to both comfort and energy conservation.
- **Passive Infrared Sensors (PIRs) Installation:** Where feasible, install Passive Infrared Sensors (PIRs) to control lighting systems. This smart technology detects motion and presence, enabling the efficient operation of lighting and significantly reducing energy wastage.
- **Future Considerations for Expansion:** In the event of business expansion beyond the original Baseline Year (January 2024 to December 2025), Fairtrade's strategy will be adaptable to incorporate a carbon emission 'unit cost'. This entails introducing a metric known as the 'Carbon Emission Intensity Factor'. This factor enables the calculation of carbon emissions per job carried out in subsequent years, such as comparing emissions in 2024 to those in 2023

Achievements and progress

The environmental management measures and projects outlined in this report have been progressing according to plan. Notably, the replacement of single-glazed windows and the replacement of one vehicle have been completed, while other initiatives are underway.

Collectively, these initiatives have yielded a carbon emission reduction of approximately four metric tons of CO₂ equivalent (tCO₂e). This achievement represents a commendable **13.81%** reduction against the 2022 baseline.

Carbon emissions in 2022 – 31.13 tCO₂

Carbon emissions in 2023 – 26.83 tCO₂

Carbon emissions in 2024 – 25.68 tCO₂

Some general advice and recommendations may be useful to reduce electricity usage (and the carbon emissions associated with these):

- Make sure the electric heaters are thermostatically controlled and temperatures are regulated at around 19 degrees
- Make sure any electronic equipment is switched off when not being used, rather than being left on standby. As an additional energy-saving measure, timers can be added to all electrical appliances.

As part of the journey, I would also strongly recommend signing up for the Government's [SME Climate Commitment](#) to further publicise your work and ambition in this area. Once your commitment has been accepted, you can refer to this on your website too.

In the coming years, I would also recommend reviewing your Scope 3 emissions (value chain/supply chain) so that a comprehensive view is obtained of your business from cradle to grave.

Carbon offsetting schemes

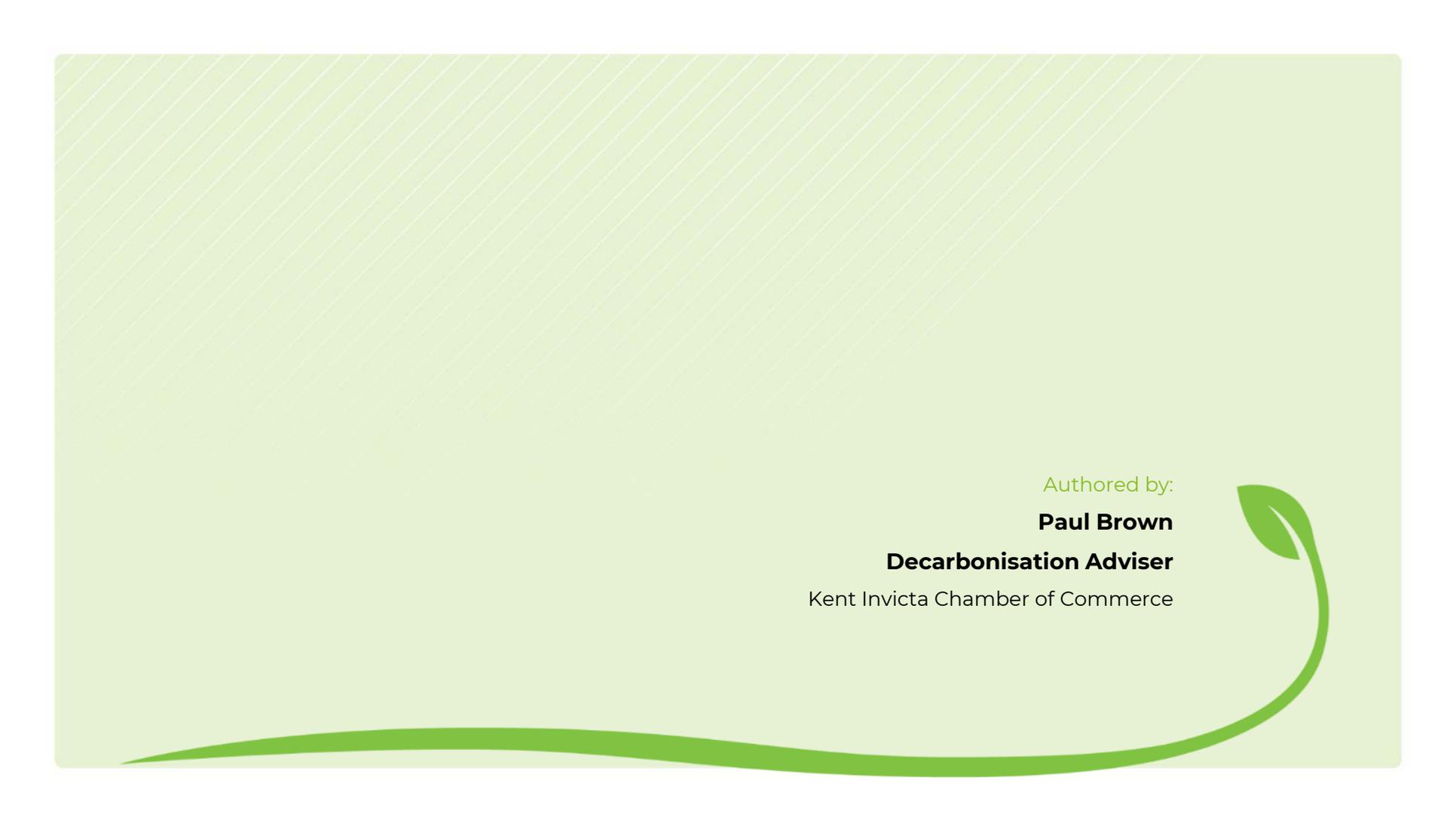
For emissions that are hard to reduce, or to move at a pace faster than the Government's plans to decarbonise the national grid, a legitimate avenue to explore is that of carbon offsetting.

Basically, carbon offsetting is where you compensate for your own carbon emissions by funding schemes which remove an equivalent amount of carbon (in the UK or elsewhere in the world).

The sheer amount of carbon offsetting schemes can be overwhelming, but there are a couple of points worth remembering:

- Only consider offsets when it is unfeasible to reduce your emissions by any other way. It should be used as a last resort rather than a starting point.
- Use an offsetting scheme which carries accreditation by a recognised scheme. Examples of these schemes are the VCS (Verified Carbon Standard) and Gold Standard schemes.
- Bear in mind that the cost of carbon offsetting in verified schemes is likely to rise exponentially in the future, so it may become more expensive to continue to offset your emissions.

Depending on the project chosen to offset your carbon emissions, an indicative cost to offset **25.68** tonnes of CO₂ would be around **£188 to £535 per year**.



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