

2023

Carbon Reduction Plan



Hydrock Consultants
For Morris Quality Bakers
8/1/2023



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Introduction

Morris Quality Bakers

Morris Quality Bakery is a family-owned bakery that has been in operation for over 100 years, starting as a local butcher's shop before evolving into one of the North West's finest bakeries. Today, the company employs 186 local residents and handles over 12,000 orders per week from a diverse range of clients, including small sandwich businesses, local authorities, and supermarkets.

At Morris Quality Bakery, they are committed to sustainability and reducing their environmental impact. Over the years, they have made significant strides in reducing their carbon emissions, water use, and waste production, while also expanding their product range to include more sustainable options. Their sustainability journey has been guided by the vision and commitment of their

owners, Henry and Christine Morris, who have led the company through several evolutions in response to changing food trends and industry regulations.

In this sustainability report, we aim to provide an overview of Morris Quality Bakery's sustainability performance, including the carbon emissions, water use, and waste production, as well as the sustainability initiatives and targets. We hope this report will demonstrate Morris Quality Bakers' commitment to sustainability and inspire their customers and stakeholders to join them in their journey towards a more sustainable future.





Commitment to achieving Net Zero

Morris Quality Bakery is deeply committed to minimising its environmental footprint and embracing sustainability as a core principle. Recognising the significance of sustainability in the food industry, the company is taking proactive measures to reduce its carbon emissions and ultimately achieve Net Zero by 2035. This ambitious goal reflects their strong dedication to environmental responsibility and ensuring a more sustainable future.

While striving towards Net Zero, it is important to acknowledge that the commitments made by Morris Quality Bakery have not yet undergone validation by the Science-Based Targets initiative (SBTi). However, it is crucial to emphasise that these commitments hold immense value and are an indispensable part of the company's overarching strategy for achieving future net zero emissions. By setting these targets and implementing sustainable practices, Morris Quality Bakery aims to align its operations with the principles of environmental stewardship, resource efficiency, and carbon neutrality.

The company recognises the significance of pursuing a holistic approach to sustainability that encompasses not only carbon reduction but also other aspects of environmental impact. By implementing innovative technologies, optimising energy consumption, improving waste management, and exploring renewable energy sources, Morris Quality Bakery is actively striving to mitigate its environmental impact across all areas of operation.

Moreover, Morris Quality Bakery understands that sustainability is not solely a company effort but also requires engagement and collaboration with stakeholders at various levels. By fostering partnerships with suppliers, customers, and local communities, the company aims to create a shared understanding and collective action towards sustainability goals. This collaborative

approach enables knowledge sharing, innovation, and the exchange of best practices, driving sustainable change beyond the boundaries of the company itself.

Baseline emissions footprint

Baseline emissions are a record of the greenhouse gases that have been produced in the past and were produced prior to the introduction of any strategies to reduce emissions. Baseline emissions are the reference point against which emissions reduction can be measured.

Morris Quality Bakers initiated the collection of emissions data to comply with the Streamlined Energy and Carbon Reporting (SECR) requirement for the financial year ending February 2023. They have reported Scope 1, 2 and limited 3 emissions (waste and water usage) and have chosen this as their baseline.

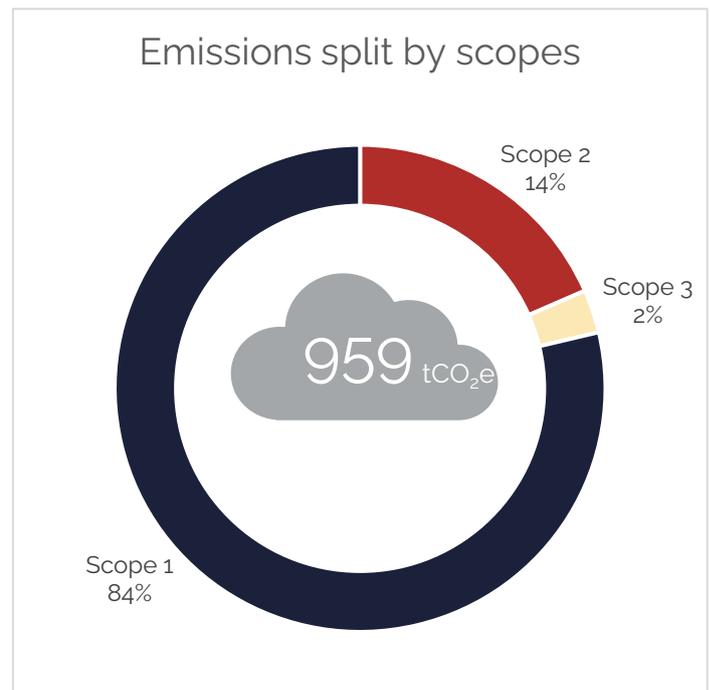




Table 1: Baseline emissions

Baseline year emissions: March 2022 to February 2023	
Note: This baseline year emissions reporting is the first year of reporting therefore there is no previous reporting or creation of a new baseline due to organisational change or restructuring.	
EMISSIONS	TOTAL (tCO ₂ e)
Scope 1	807.27
Scope 2	134.85
Scope 3*	16.49
Total Emissions	958.61

*Limited scope 3 of waste & water consumption

Table 2: Emission sources data collection and calculation rationale

Emissions inventory item	Unit of measure	Carbon conversion factor source	Primary data source	Data type	Scope
Diesel	Litres	DEFRA	Fuel card reports	Measured	1
Gas	Litres	DEFRA	Monthly utility bills	Measured	1
Electricity	kWh	DEFRA	Monthly Utility bills	Measured	2
Waste	Tonnes	DEFRA and Veolia	Veolia waste management bill	Measured	3
Food Waste	Tonnes	DEFRA	Food manufacturing logs	Measured	3
Fresh/Wastewater consumed and generated	Litres	DEFRA	Water Consumption/Wastewater Bill	Measured	3

Table 3: FY2024 reporting table/placeholder.

March 2023 to February 2024	
EMISSIONS	TOTAL (tCO ₂ e)
Scope 1	Placeholder
Scope 2	Placeholder
Scope 3	Placeholder
Total Emissions	Placeholder

Carbon Reduction Projects

Complete Carbon Reduction Initiatives

In the reporting year, Morris Quality Bakers have taken several actions to improve their energy efficiency and reduce carbon emissions, including delivery round and vehicle rationalisation, reducing food waste, and optimising their use of solar power.



Solar PV

Morris Quality Bakery has already taken steps to reduce reliance on the UK grid and move to renewable energy on-site. The bakery has installed a 100kW solar PV system located on the roof of their site in Lancashire. These solar panels produce clean, renewable energy by converting sunlight into electricity, reducing reliance on fossil fuel-based energy sources and reducing overall greenhouse gas emissions.



LED Lighting

The environment is influenced by lighting in multiple aspects, such as energy consumption, the materials utilised in lighting production, and the influence of light on the nighttime sky (which leads to light pollution). Efforts are being made to replace lighting

with LED technology in functional spaces, and there is also the possibility of upgrading.



Food Waste Management

When food waste decomposes in landfills, it produces methane, a potent greenhouse gas. By recycling food waste through composting or anaerobic digestion, companies can significantly reduce methane emissions. Methane has a much higher global warming potential than carbon dioxide, so mitigating its release can have a substantial impact on reducing greenhouse gas emissions. Morris Quality Bakers effectively addresses its food waste by sending it to an approved food waste carrier, which then recycles the waste into animal feed for farms. This sustainable practice not only ensures responsible waste management but also helps mitigate scope 3 emissions associated with the bakery's operations.



ISO 14001

ISO 14001 is an internationally recognized environmental management standard that provides a framework for organizations to establish and maintain an effective environmental management system (EMS). While ISO 14001 does not specifically focus on carbon emissions reduction, implementing this standard can indirectly

help a business reduce its carbon footprint through setting objectives and targets, implementing operational controls, monitoring and measuring emissions and employee engagement and training.

Planned Carbon Reduction Initiatives

Following the collection of scope 1, 2 and limited 3 emissions data, several key hotspots were identified. These include, diesel usage by delivery vans, natural gas to power baking equipment and electricity from the grid to power equipment essential for baking and other office machinery. To combat these hotspots, the following initiatives can be undertaken.

Hotspot: Diesel



Electric Vehicles

Replacing diesel-powered delivery vans with electric vehicles (EVs) or hybrid vehicles. EVs produce zero tailpipe emissions and can significantly reduce carbon emissions associated with transportation. Hybrid vehicles combine electric and internal combustion engine technology, offering a more fuel-efficient and lower-emission alternative.

Transition to HVO Fuel

HVO is a renewable and sustainable diesel substitute made from vegetable oils, waste fats or other biological sources. It has similar properties to conventional diesel fuel but with significantly lower greenhouse gas emissions.

HVO fuel offers substantial carbon emissions reductions compared to regular diesel. It can achieve up to 90% reduction in CO₂ emissions over its lifecycle¹, helping the bakery significantly reduce its carbon footprint.

HVO can be used as a drop-in replacement for diesel without requiring any vehicle modifications or engine conversions. This makes it a convenient and accessible alternative fuel option for the bakery's existing diesel-powered fleet.

This sustainable fuel also meets the quality standards and specifications required by diesel fuel regulations, ensuring compliance with existing fuel standards.

It is important to note that the availability and pricing of HVO fuel may vary depending on the region. The bakery should research local suppliers and consult with fuel providers to assess the feasibility and cost-effectiveness of using HVO fuel in their operations.

Route Optimisation

Implement efficient route planning and optimisation systems to minimise mileage and fuel consumption during deliveries. Optimising delivery routes can reduce the number of trips, distance travelled, and overall fuel consumption. This process will have significant benefits in terms of carbon emissions and operational costs.

Efficient Vehicle Maintenance

Regularly maintain delivery vehicles to ensure optimal performance and fuel efficiency. Properly inflated tires, regular engine tuning, and timely oil changes can improve fuel efficiency and reduce emissions.

Employee Awareness and Training

Educate employees about the importance of reducing diesel usage and promoting sustainable practices. Encourage their participation in adopting fuel-efficient driving techniques and raising awareness of the bakery's sustainability goals. An effective example would be an anti-idling policy with all delivery drivers.

¹

<https://www.nationwidefuels.co.uk/faq/what-is-hvo-fuel-an-faq/>

Hotspot: Natural Gas



Energy Efficiency Upgrades

Conducting an energy audit to identify areas where energy efficiency improvements can be made in the bakery would be a good first step to reducing natural gas usage. Retrofitting the bakery with energy-efficient equipment, such as ovens, proofers and HVAC systems can significantly reduce natural gas consumption while maintaining optimal performance.

Heat Optimisation

Install heat recovery systems in the bakery to capture and reuse waste heat generated by the ovens. This captured heat can be utilised for preheating incoming air, water, or other process requirements, reducing the overall energy demand and CO₂ emissions.

Preheating and Load Management

Implement preheating strategies to minimise warm-up time for ovens and other equipment. Additionally, manage the baking load effectively to ensure that ovens are fully utilised during operational hours, avoiding unnecessary warm-up cycles.

Timers and Controls

Install timers and controls on equipment to automate processes and optimise energy usage. This allows for precise control over heating and ventilation systems, reducing natural gas consumption.

Energy Management Systems

Implement energy management systems to monitor and control energy usage in real-time. These systems provide data on energy consumption patterns, enabling the bakery to identify areas for improvement and make informed decisions to reduce natural gas usage.

Behavioural Changes

Educate employees about energy-saving practices and encourage behavioural changes. Promote turning off equipment when not in use, ensuring proper equipment maintenance, and adopting energy-conscious habits throughout the bakery's operations.

Hotspot: Electricity from Grid



Sustainable Energy Procurement

Sustainable procurement of electricity will aid Morris Quality Bakers achieve Net Zero. Purchasing Renewable Energy Guarantees of Origin (REGO's) from renewable energy generators, such as wind farms or solar power installations certifies that a specific amount of energy was produced from renewable sources. It is important for Morris Quality Bakers to ensure the REGO certificates it purchases are valid and legitimate. Verification can be done by checking the certification and accreditation of the issuing body and confirming that the certificates comply with relevant regulations and standards.

In addition to purchasing REGOs, the company can consider installing renewable energy systems on-site, such as increasing the number of solar panels or introducing wind turbines. Generating renewable energy on-site not only reduces reliance on the grid but also provides an opportunity to further reduce carbon emissions and potentially generate excess energy to contribute back to the grid.

These initiatives can help reduce electricity consumption and reduce carbon emissions in the bakery's operations.



Declaration and Sign Off

This Carbon Reduction Plan has been completed in accordance with PPN 06/21 and associated guidance and reporting standard for Carbon Reduction Plans.

Emissions have been reported and recorded in accordance with the published reporting standard for Carbon Reduction Plans and the GHG Reporting Protocol corporate standard² and uses the appropriate Government emission conversion factors for greenhouse gas company reporting³.

Scope 1 and Scope 2 emissions have been reported in accordance with SECR requirements, and the required subset of Scope 3 emissions have been reported (where available) in accordance with the published reporting standard for Carbon Reduction Plans and the Corporate Value Chain (Scope 3) Standard⁴.

This Carbon Reduction Plan has been reviewed and signed off by the board of directors (or equivalent management body).

Signed on behalf of Morris Quality Bakers:

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Date:

² <https://ghgprotocol.org/corporate-standard>

³ <https://www.gov.uk/government/collections/government-conversion-factors-for-company-reporting>

⁴ <https://ghgprotocol.org/standards/scope-3-standard>