

CARBON REDUCTION PLAN CASTELL HOWELL FOODS LIMITED

Client:

Castell Howell Foods Limited

Prepared for:

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Date:

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Auditel's Credentials – Verification Bodies



Foreword

Castell Howell Foods Limited recognises how important it is for us to make sure we are committed to reducing our carbon emissions and the impact we have on the environment in everything we do. This Carbon Reduction Plan (CRP) sets out how we will continue to improve the ways in which we use our resources to ensure the least harm to our environment.

Each year this grows in importance as our awareness is raised on the critical importance of changing our behaviours regarding climate change and sustainability. Legislation and regulation reflect this priority, and we are committed to ensuring we meet our requirements and where possible, exceed expectations.

Whether we are thinking of how to travel to work, where we hold a meeting, where we purchase supplies from and the myriads of choices we make in our daily life, having carbon underpinning every choice we make and every action we take must be integral to us delivering our vision, mission, and strategic goals.

This year we have calculated our carbon footprint and the engagement with our staff has proved very useful in helping us to identify where we need to change our behaviour and how to do it. This has helped us to prioritise the key areas we want to focus on for the next year as outlined in the detailed action plan. We also recognise that many of the measures we plan to take to reduce our carbon footprint will also help the us operate more efficiently, cut costs, and go some way to protecting us from the inevitable future increases to fuel and energy costs.

Using the information gathered and working with our dedicated staff, we will be able to set challenging targets and report our progress on the journey to Net Zero.

Introduction

This Carbon Reduction Plan conforms to the requirements of Procurement Policy Note PPN06/21; "Taking Account of Carbon Reduction Plans in the procurement of major government contracts" and ISO14064-1.

Context

Climate change is a real and immediate threat for us all. Carbon dioxide (CO₂) levels have already reached their highest level for almost half a million years and are rising faster than ever. Like all businesses, Castell Howell Foods Limited has a key role to play in mitigating the effects of climate change, both as an employer and through the products they provide. Castell Howell Foods' climate change challenge falls into:

- ✎ Cutting the businesses carbon footprint
- ✎ Preparing for the impacts of a changing climate

Aside from the moral and environmental case for taking action to tackle climate change there are many other drivers for Castell Howell Foods Limited to address this issue. These include:

- ✎ Leadership - Taking strategic action towards reducing carbon emissions will ensure that Castell Howell Foods Limited can lead the way in developing effective mechanisms to tackle climate change. This will help stimulate low carbon transitions across the regions in which we operate.
- ✎ Cost savings - With increasing pressure on all businesses to cut costs, reducing the amount spent on energy bills is a key driver for lowering our energy consumption.
- ✎ Reputation - With stretching national targets, there is increasing pressure on businesses to be seen as "doing their bit" and playing a leadership role on climate change action. Failure to act could lead to reputational risks and adversely affect the company's public image.

Reporting Standards and Scope

The calculations of Castell Howell Foods Limited's carbon footprint is in line with the Greenhouse Gas Protocol Corporate Accounting and Reporting Standard.

Castell Howell Foods Limited employs Auditel as the consultancy providing carbon accounting services. Auditel undertake a series of quality assurance checks in line with industry best practice to ensure that the Greenhouse Gas statements represent a faithful, true, and fair account of Castell Howell Foods Limited's GHG emissions from the data available.

The process follows the principles of ISAE3410, Assurance Engagements on Greenhouse Gas Statements standard, but is not a formal assurance to the standard currently. It is carried out to ensure that the statement is considered materially correct, a fair representation of the Greenhouse Gases emitted and is prepared in alignment with the Greenhouse Gas Protocol and the relevant activities of Castell Howell Foods Limited.

Net Zero Commitment

Castell Howell Foods Limited are fully committed to achieving Net Zero emissions across all scopes by 2050 at the latest. This will ensure Castell Howell Foods Limited are aligned with the UK Government's commitment to reducing greenhouse gas emissions by 90% of 1990 levels, as set out in the 2008 Climate Change Act. This Carbon Reduction Plan presents Castell Howell Foods Limited's baseline greenhouse gas emissions and outlines how the company plans to reach its Net Zero targets in the short and medium-term.

Baseline Emissions

Baseline Year: 01/11/2022 – 31/10/2023

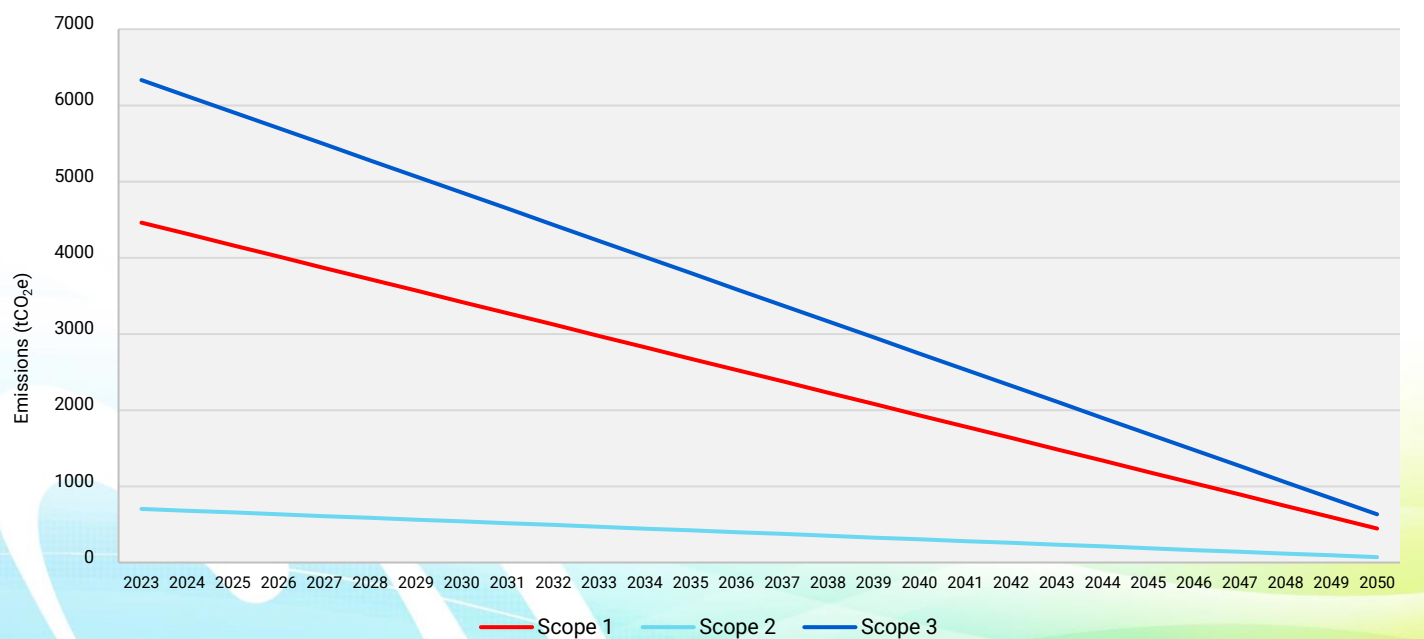
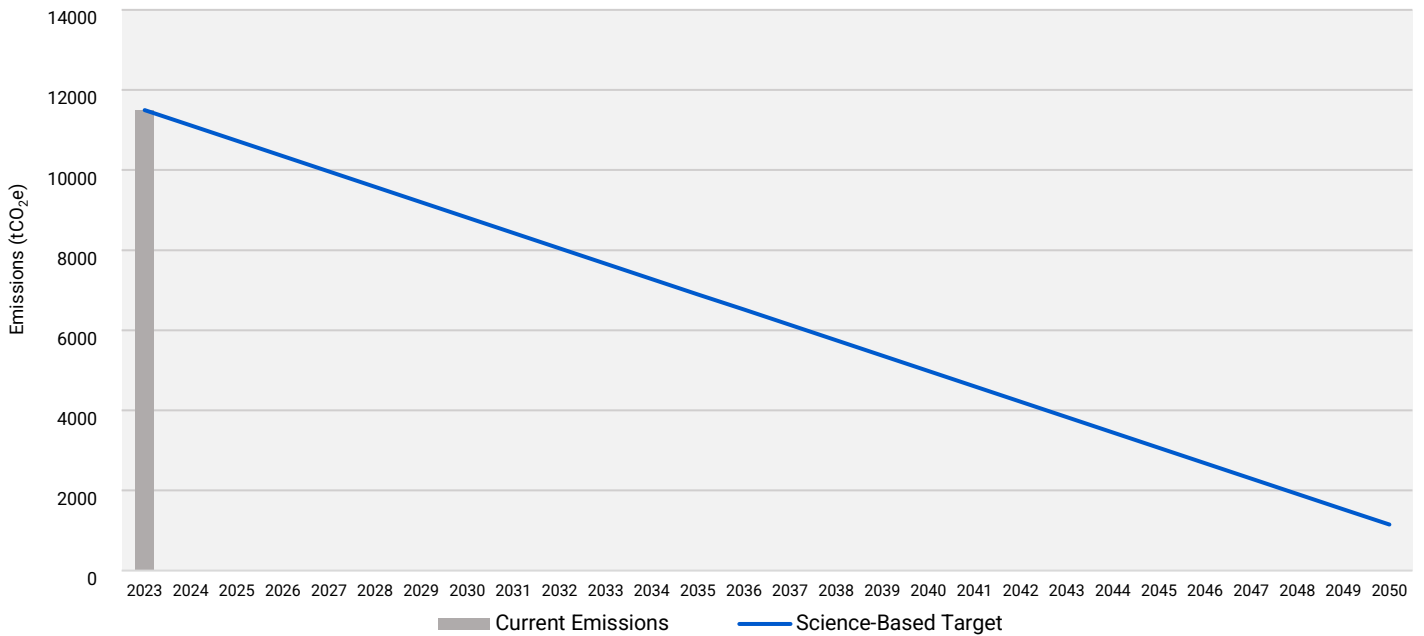
Scope	Category	Emissions (tCO ₂ e)	Contribution to Footprint (%)
1	Mobile Combustion	4,080.97	35%
	Stationary Combustion	103.72	1%
	Fugitive Emissions	276.09	2%
	Total	4,460.77	39%
2	Electricity	703.50	6%
	Total	703.50	6%
3	Purchased Goods and Services	0.61	<1%
	Fuel and Energy-Related Activities	1,245.03	11%
	Upstream Transportation and Distribution	2,647.34	23%
	Waste from Operations	12.38	<1%
	Business Travel	66.91	1%
	Employee Commuting and Homeworking	2,360.01	21%
	Total	6,332.28	55%
All	Total	11,496.56	100%

Intensity Metrics: 01/11/2022 – 31/10/2023

Metric	Emissions (tCO ₂ e)
tCO ₂ e per tonne sold product	0.18
tCO ₂ e per £1M turnover	58.01
tCO ₂ e per employee	16.73
tCO ₂ e per m ² floor space	0.97










Science-Based Targets

By accurately establishing our baseline carbon emissions for the 2022/23 financial year, we have laid the foundation for setting robust, evidence-based targets to guide our emissions reduction strategy. The graphs below outline our science-based trajectory, illustrating the annual reductions required to achieve Net Zero emissions by 2050. In alignment with the UK Government's Net Zero target, we are committed to reducing our Scope 1, 2, and 3 emissions by 23% by 2030 and by 90% by 2050. The later sections of this report will detail the initiatives implemented so far in our carbon reduction journey, as well as the planned measures to help meet our emissions targets.



Completed Carbon Reduction Initiatives

As part of our carbon reduction journey, the following measures have already been implemented:

-  **Emissions Reporting:** With the help of Auditel, we have completed a comprehensive assessment of our Scope 1, 2, and 3 carbon emissions. This process involved rigorous data validation to ensure the accuracy of our calculations. By establishing a reliable baseline of the company's emissions, we now have a clear understanding of our current impact and a solid foundation for setting meaningful carbon reduction targets.
-  **Welsh Government Pilot Study:** We recently participated in a Welsh Government pilot study designed to support food and drink businesses in developing CRPs. The study provided valuable insight into the broader carbon impact of our operations by highlighting the importance of addressing the embedded emissions which lie within our supply chain, particularly from our beef and dairy products. Whilst this CRP is being developed using our baseline carbon footprint calculated and independently verified by Auditel, the findings from the Welsh Government pilot have emphasised the need to account for embedded supply chain emissions, alongside our operational emissions, when identifying opportunities to reduce our overall environmental impact. Further details regarding our participation in this study are available in Appendix A.
-  **Renewable Energy:** To reduce our energy consumption, we installed solar panels at our Cross Hands site. In the 2022/23 financial year, these panels generated 12% of our total annual energy usage.
-  **Energy Efficient Buildings:** To improve energy efficiency, we've widely adopted LED lighting across our facilities. In key areas, automated lighting systems have been installed to further reduce unnecessary energy use. Additionally, motion sensors have been fitted to office air conditioning units to prevent energy waste when rooms are unoccupied. We have also invested in the efficiency of our refrigeration systems by installing high-speed automatic doors on freezers and optimising freezer defrosting cycles.
-  **Fleet Management:** To ensure our fleet emissions are reduced where possible, we ensure all company vehicles are EURO 6 compliant.
-  **Route Optimization:** Our logistics team are constantly exploring ways to optimise routes and reduce fuel consumption to distribute goods more efficiently. Our commitment to sustainable distribution reflects our dedication to meeting the needs of today without compromising the needs of tomorrow.
-  **Cycle To Work Scheme:** A Cycle to Work scheme has been implemented to incentivise low-carbon commuting whilst also promoting employee health and wellbeing.
-  **Sourcing Local:** We are committed to responsible sourcing practices that protect ecosystems and support the wellbeing of farmers and communities. By partnering with local suppliers who use ethical farming methods, we reduce upstream transport emissions and promote fairness across the supply chain. Additionally, we take part in the Welsh Veg in Schools project, which aims to increase the availability of locally grown vegetables in primary schools. Through this initiative, we not only highlight the environmental advantages of sourcing locally, but also help build resilience against future environmental challenges and potential supply chain disruptions.
-  **Product Life Cycle Analysis:** To better understand the environmental impacts of our products, we have conducted a life cycle analysis of our organic salmon portions. This in-depth analysis allows us to identify key areas for improvement throughout the entire product journey. Whilst this does

not directly influence our operational carbon emissions, it provides insight into the embedded emissions within the products we sell.

- Supplier Audits:** We have also collaborated with NFU Energy to conduct carbon audits at two farms that supply us with Welsh beef. This proactive engagement with our suppliers allows us to identify best practices and areas for potential reduction at the farm level. Whilst this does not directly influence our operational carbon emissions, it helps us understand the emissions that lie within our supply chain, hence helping us better manage our wider environmental impact.
- Reducing Food Waste:** To reduce food waste at each stage of our operations we have invested in careful inventory management and innovative packaging solutions. We have also developed partnerships with food banks to help conserve resources whilst also positively impacting food security in the communities we work in.
- Educating and Empowering:** Sustainability is a shared responsibility that extends beyond the boundaries of our organisation. We believe that education and collaboration are powerful drivers of collective change. That's why we actively engage with our partners, customers, and communities to raise awareness about sustainable practices and responsible consumption. Through these efforts, we aim to inspire others and spark a ripple effect of positive behavioural change.




Planned Carbon Reduction Initiatives

To help achieve our Net Zero targets, we plan to implement the following initiatives:


Short Term

- Electrification of Fleet:** As part of our commitment to decarbonising our logistics operations, we expect the delivery of our first fully electric lorry by the end of the 2023/24 financial year. This marks a significant step for Castell Howell, reflecting a clear investment in reducing direct transport emissions. The electric lorry will help lower our carbon footprint, reduce dependence on fossil fuels, and support our transition to cleaner, more sustainable transport solutions.
- Merthyr Acquisition:** During the 2023/24 financial year, we plan to acquire our Merthyr site, creating opportunities to expand existing facilities, including the addition of ambient, refrigerated, and frozen storage. We also intend to invest in energy efficiency at this site, building on the successful energy-saving measures already implemented elsewhere (e.g. motion sensors for lighting and air conditioning). While this expansion will naturally increase our overall energy use, our focus on efficiency will ensure that energy is used responsibly and waste is minimised.
- Cleaner Commutes:** During our baseline reporting year, gathering accurate data on employee commuting proved challenging. Moving forward, we are committed to improving how we capture commuting patterns to more precisely calculate emissions. Once we have a clearer understanding of our baseline, we will introduce targeted measures to reduce these emissions. Planned initiatives include a salary sacrifice scheme for electric vehicles to lower personal fuel use. We also plan to install EV chargers at our head office and enhance our Cycle to Work scheme by installing secure bike storage and shower facilities. We will also promote carpooling and raise awareness around sustainable commuting options.
- Product Innovation:** We are committed to developing a new range of products focused on diversifying protein sources and delivering enhanced nutritional and environmental benefits. For example, we plan to introduce nutritionally balanced meatballs, which reduce meat content by incorporating vegetables and pea protein. We will also explore the feasibility of introducing reduced beef content burgers, made from locally grown mushrooms sourced just 10 miles from

our manufacturing site. This will help reduce the carbon footprint of our supply chain by cutting transport emissions linked to ingredient sourcing.

-  **Strengthened Commitment to Local Sourcing:** In the upcoming financial year, we envisage the Welsh Veg in Schools project to expand its reach to even more schools across Wales. Further increasing the proportion of locally sourced vegetables will have a positive impact on our upstream transport emissions. In the following year, we will launch a pilot study to explore the environmental and economic benefits of locally sourced beef across the Llŷn Peninsula. This project will aim to support sustainable agriculture whilst also addressing the increasing need for biodiversity gains in the area.
-  **Sustainable Supplier Network:** We will continue to assess the environmental practices of our suppliers. Specifically, we will investigate the environmental footprints of our two main dairy suppliers. Through collaborating with an expert consultant, we will conduct a comprehensive assessment of various factors, including the type of feed and farming practices employed for the dairy herds, as well as a detailed analysis of the environmental impact of their yoghurt production methods. This collaborative effort aims to identify specific areas for improvement in resource efficiency, waste reduction, and overall carbon emissions within their value chains.
-  **Carbon Sequestration:** We will actively support our consultant partners at Lafan in their innovative project exploring the effectiveness of biochar produced from agricultural slurry from the dairy sector. This innovative approach holds immense potential for revolutionising nutrient management and, more importantly, for achieving genuine carbon sequestration within our supply chain.

Long Term

-  **Transition to Biofuels:** To reduce our direct emissions from fuel consumption, we are committed to exploring alternative fuels and innovative transport technologies. Biofuel has emerged as a potentially viable option, particularly where it could serve as a 'drop-in' replacement for fossil fuels, requiring minimal modifications to existing fleet infrastructure. Whilst using biofuel would facilitate significant carbon reductions, biofuel cultivation has also been associated with deforestation, habitat loss and increased use of fertilisers and pesticides. Therefore, a thorough cost-benefit analysis will be conducted to determine whether using biofuel aligns with Castell Howell's wider sustainability goals. Specifically, we will investigate the feasibility of utilising biofuel derived from used cooking oil collected from our customers. This approach could improve traceability and reduce environmental impact, while supporting a closed-loop system that aligns with our sustainability goals.

To better understand the likely impact of these initiatives, a series of calculations have been made to estimate the expected carbon reductions. As outlined below, the above measures are anticipated to deliver a 28% decrease in total emissions by 2050. This projection is based on a phased transition from diesel to recycled Hydrotreated Vegetable Oil (HVO) in our delivery fleet, with the aim of replacing 50% of our current diesel usage with recycled HVO by 2040, and a further 30% by 2050. The pace of implementation will depend largely on both practical feasibility and how well the use of biofuels aligns with our broader sustainability strategy. The short-term projection also accounts for our plans to introduce our first fully electric lorry and implement a salary sacrifice scheme for electric vehicles (EVs).

Scope	Baseline Emissions (tCO ₂ e)	Target Emissions (tCO ₂ e)			Reduction by 2050 (%)
	2022/23	2030	2040	2050	
1	4,460.77	4,447.33	2,633.48	1,545.17	65%
2	703.50	703.50	703.50	703.50	0%
3	6,332.28	6,139.09	6,139.09	6,027.14	5%
Total	11,496.55	9,476.06	9,476.06	8,275.81	28%

It is important to note that some of the identified carbon reduction measures could not be accurately quantified and are therefore excluded from the modelled outcomes. As a result, we anticipate additional emissions reductions, particularly within our Scope 3 emissions, beyond those captured in the current projections. A full list of included and excluded reduction measures can be found in Appendix B. While our current measures are projected to achieve a 28% reduction in carbon emissions by 2050, falling short of our 90% target, we remain confident that advancements in technology and the implementation of additional, currently unquantifiable initiatives will enable us to significantly increase our overall reduction and move closer to our long-term goal.

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 standard¹ and uses the appropriate Government emission conversion factors for greenhouse gas company reporting.

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

This Carbon Reduction Plan has been reviewed and signed off by the board of directors.

Signed on behalf of Castell Howell Foods Limited by:

Matt Lewis
Managing Director

Date: 15/07/25

Appendix A

Details of Welsh Government pilot study

Castell Howell recognises the critical importance of collective action in achieving Wales’s Net Zero emissions target by 2050. To support this national ambition and to foster a more sustainable food and drink sector across Wales, we actively participated in a pilot initiative launched, and funded, by the Welsh Government in 2024 (which progressed through to April 2025), aimed at assisting food and drink businesses in developing their own CRPs.

As part of this valuable program, which provides businesses with specialist technical advice to establish carbon baselines and develop comprehensive CRPs aligned with the net-zero 2050 target, Castell Howell received a comprehensive CRP in April 2025. While we have noted some discrepancies between the figures presented in this and our internal emission reports (verified by our Carbon Accounting Partners, Auditel) due to the inherent nuances of our large-scale and complex operations, we wholeheartedly appreciate this as a crucial learning curve for all stakeholders involved, including the Welsh Government and participating businesses. The development of standardised methodologies and the sharing of expertise are vital steps in building a consistent and effective approach to carbon reduction across the Welsh food and drink industry.

One notable distinction in the calculations conducted during the Welsh Government pilot was the inclusion of embedded emissions within our products. This approach revealed the broader carbon impact of items across our supply chain, with particular emphasis on the emissions linked to our dairy and beef products (Figure 1). The insights gained through this collaborative process have further highlighted the necessity of focusing our engagement efforts with suppliers in these key agricultural sectors. By working closely with dairy farmers and beef producers to understand their carbon footprints and support their transition towards more sustainable practices, we can leverage the findings of both our independently verified data and the broader insights from the pilot scheme to develop targeted and effective strategies for reducing our overall environmental impact.

This collaborative approach, both with government initiatives and our supply chain partners, underscores our commitment to driving meaningful and lasting change towards a more sustainable future for the Welsh food sector.

Product Emissions Output (kgCO₂e)

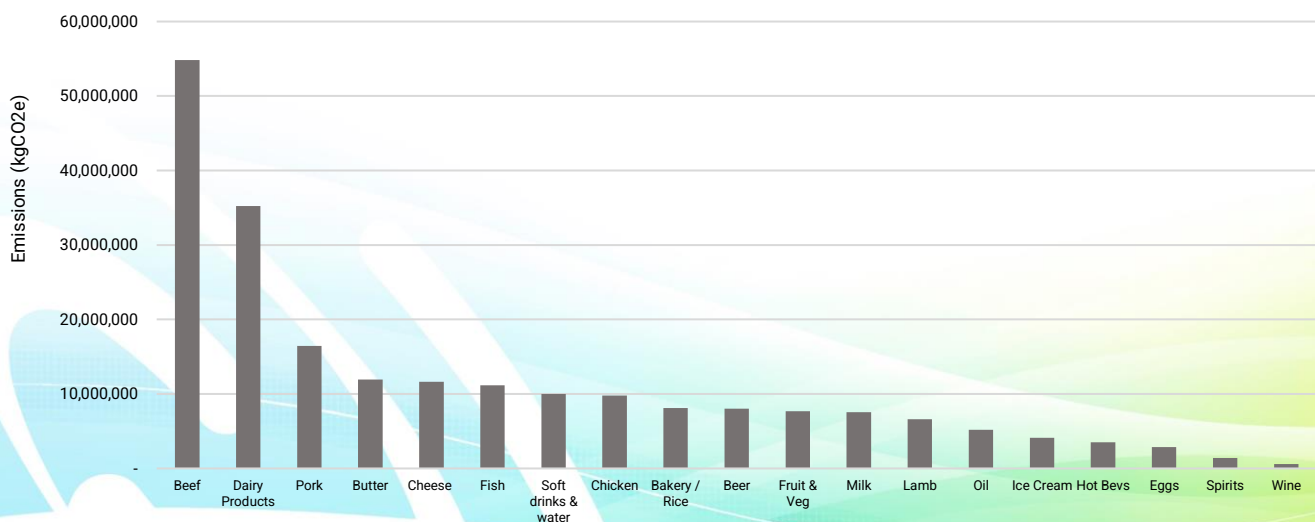


Figure 1. Embedded product emissions (kgCO₂e) by product type.

Appendix B

List of quantified carbon reduction measures

Initiative	Target Implementation Date	Scope Category Impacted	Predicted Reduction (tCO ₂ e)
Introduction of first fully electric delivery vehicle.	2030	Scope 1 Fleet and Scope 3 Fuel and Energy-Related Activities	16.71
Implementation of company-wide salary sacrifice scheme for Electric Vehicles (EVs)	2030	Scope 3 Commuting	3.35
Transition towards using recycled Hydrotreated Vegetable Oil (HVO) in company vehicles	2040-2050	Scope 1 Fleet and Scope 3 Fuel and Energy-Related Activities	3,200.69

List of unquantified carbon reduction measures

Initiative	Target Implementation Date	Scope Category Impacted
Acquisition of Merthyr depot and planned implementation of energy efficiency measures.	2030	Scope 2 Electricity and Scope 3 Fuel and Energy-Related Activities.
Promote low-carbon modes of commuting, through raising awareness, and installing bike storage and shower facilities.	2030	Scope 3 Employee Commuting
Install EV chargers on company premises, to promote use of EVs and encourage uptake of company salary sacrifice scheme.	2030	Scope 3 Employee Commuting

Product innovation to include more locally sourced ingredients.	2030	Scope 3 Upstream Transportation and Distribution.
Expansion of Welsh Veg in Schools project to reach more schools across Wales.	2030	Scope 3 Upstream Transportation and Distribution.
Engage with dairy suppliers and conduct environmental impact analyses.	2030	N/A. Included in wider carbon impact only.
Actively support consultant partners at Lafan in their project to explore biochar production from livestock slurry.	2030	N/A. Included in wider carbon impact only.