



# PROTOCOL

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A  
**netzeronow**  
INITIATIVE

SUPPORTED BY



  
**Pernod Ricard UK**  
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# Glossary of terms.

For a more in depth lexicon and glossary of words and terms linked to climate change, see the IPCC Annex<sup>1</sup>.

## Absolute Zero

When no greenhouse gas emissions are attributable to an actor's activities across all scopes.

## Anthropogenic

Resulting from or produced by human activities

## Anthropogenic Removals

The withdrawal of greenhouse gases from the atmosphere, as a result of deliberate human activities.

## Assessor

An independent body/organisation that will inspect reported data to ensure it meets the standards of this and other protocols.

## Carbon Credit

Carbon credits are generated through projects which remove carbon or prevent carbon from entering the atmosphere. These projects are made possible by the sale of the credits that they generate as a carbon offset. 1 Carbon Credit = 1 tonne of CO<sub>2</sub>e either removed from the atmosphere or prevented from entering the atmosphere. While carbon credits may also involve other Greenhouse gases, carbon is by far the most common and prevalent within the industry.

## Carbon Dioxide (CO<sub>2</sub>)

A naturally occurring gas, also a by-product of burning fossil fuels (such as oil, gas, and coal), of burning biomass, of land use changes, and of industrial processes. It is the principle anthropogenic greenhouse gas that affects the Earth's radiative balance.

## Carbon Footprint

Often used when reference to all Greenhouse Gas emissions associated with a product, business, or entity. See Greenhouse Gas.

## Climate Change

A change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods. Also referred to as the Climate Emergency, Global Warming and Global Heating.

## Cradle-to-grave

Measuring the total greenhouse gas emissions from the extractions of raw materials to create the product, through to the product's manufacture, distribution, use and disposal.

## Cradle-to-retail

Measuring the total greenhouse gas emissions from the extractions of raw materials to create the product, through to the product's manufacture, packaging, and distribution to the retailer. This will include all emissions needed to get a product to the restaurant or site.

## Emissions Factor

A coefficient that quantifies the emissions of a gas per unit activity. It is used for calculations of the greenhouse gas footprint associated with a product or activity. Emissions factors are often presented in CO<sub>2</sub>e (Carbon dioxide equivalent). This is the 'multiplier' that is applied to activity data in order to calculate the footprint. For more information, see Section 2.1 Greenhouse Gases.

## Global warming potential (GWP)

An index measuring the radiative forcing following an emission of a unit mass of a given substance, in a specific time period, relative to carbon dioxide (reference unit). The GWP represents the combined effects of the differing times these substances remain in the atmosphere. For more information, see Section 2.1 Greenhouse Gases.

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1. IPCC, 2018: Annex I: Glossary [Matthews, J.B.R. (ed.)]. In: Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty

## Glossary of Terms.

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### Greenhouse effect

The infrared radiative effect of all infra-red absorbing constituents in the atmosphere. The change in Greenhouse gas concentration because of anthropogenic emissions contributes to an instantaneous radiative forcing. Surface temperatures warm in response to this forcing.

### Greenhouse gas (GHG)

A gas that contributes to the greenhouse effect by absorbing infrared radiation. Groups of gases recognised by the United Nations Framework Convention on Climate Change (UNFCCC) include carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulphur hexafluoride (SF<sub>6</sub>).

### Greenhouse gas (GHG) Neutral

Condition in which anthropogenic GHG emissions are balanced by anthropogenic GHG removals. See also Carbon Neutral & Net Zero.

### Ibid

Refers to a source that is the same as the previous numbered reference

### The Intergovernmental Panel on Climate Change (IPCC)

The United Nations body for assessing the science related to climate change.

### Net Zero

Net Zero greenhouse gas emissions are achieved when anthropogenic emissions of greenhouse gases in to the atmosphere are actively reduced. The remaining residual emissions are balanced by removals over a specific period of time. For more details, see Section 2.1.

### Offsetting

An action or activity (such as the planting of trees) that compensates for the emission of carbon dioxide or other greenhouse gases to the atmosphere. A carbon offset occurs when an individual company or organization directly or indirectly (by funding projects in other locations) removes greenhouse gases from the atmosphere or prevents a certain quantity of greenhouse gases from being released. Offsetting is regulated and more details are listed in Section 3.3.3.

### Paris Agreement / Paris Aligned

The Paris Agreement was a United Nations mandated treaty, which was adopted in 2015. The agreement, adopted by 196 signatories, sought to “limit the temperature increase to 1.5°C above pre-industrial levels”, which is what alignment is aimed at achieving.

### Science Based Targets initiative (SBTi)

Emissions reduction targets that are informed by the latest climate science and are sufficiently robust to meet the goals of the Paris Agreement. See section 2.4.1.

### Scope 1, 2 & 3 emissions

Scopes refer to different sources of greenhouse gas emissions within the full value chain of an organisation. A detailed breakdown of scopes is listed on the GHG Protocol website<sup>2</sup>.

### Small and Medium Sized Enterprises (SMEs)

These are defined as organisations with fewer than 250 employees, or with turnover of less than €50million.

### The United Nations Framework Convention on Climate Change (UNFCCC)

The United Nations entity tasked with combating “dangerous human interference with the climate system” and coordinating the global response to climate change.

### Zero emissions

Applies to the state of a subject when new Greenhouse Gas emissions are reduced to zero.

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2. GHG Protocol, 'Corporate Value Chain Accounting Report Standard', 2011, [https://ghgprotocol.org/sites/default/files/standards/Corporate-Value-Chain-Accounting-Reporting-Standard\\_041613\\_2.pdf](https://ghgprotocol.org/sites/default/files/standards/Corporate-Value-Chain-Accounting-Reporting-Standard_041613_2.pdf).



# Foreword.

The concept of Net Zero has been at the centre of international climate change discussions since the Paris Agreement (2015) bound all signatories to:

***“Achieve a balance between anthropogenic emissions by sources, and removals by sinks of greenhouse gases in the second half of this century”<sup>4</sup>***

The most recent IPCC Assessment Report, AR6 (2021), has reiterated the need to achieve net zero emissions in order to reduce the catastrophic impact of impending climate change.

***“Limiting human-induced global warming to a specific level (1.5°) requires limiting cumulative CO<sub>2</sub> emissions, reaching at least net zero CO<sub>2</sub> emissions, along with strong reductions in other greenhouse gas emissions”<sup>5</sup>***

***“Net zero GHG emissions, will halt human-induced global warming and/or lead to slight reversal below peak warming levels. Net zero CO<sub>2</sub> emissions will approximately lead to a stabilisation of CO<sub>2</sub>-induced global warming”<sup>6</sup>***

This urgent need has inspired cities, industries, and businesses around the world to join the UN’s ‘Race to Net Zero’ with many aiming to reach the target well before 2050. In 2019, the UK government, backed by the guidance of the national Climate Change Committee, made net zero targets a legal requirement, with all organisations required to set a target by 2050 at the latest (and 2045 in Scotland). In April 2021, the UK Government released its sixth Carbon Budget, updating the mid-point goals for achieving net zero.

By 2035, GHG emissions must be reduced by 78% of 1990 levels.<sup>7</sup>

Due to the pressing need for emissions reductions, there has been great pressure on businesses to reach net zero much more quickly than these government requirements. In Spring 2021, over 1/3 of FTSE 100 companies have set their Net Zero targets. Fewer smaller businesses have been able to set targets, with the figure for SMEs with set targets less than 20%<sup>8,9</sup>. This reduced engagement among smaller businesses demonstrates a critical weakness in national climate policy – a lack of support for SMEs

to go Net Zero. The aim of this document is to provide support for the many thousands of small and medium sized businesses which are the backbone of the UK economy.

A recent poll found that of those businesses that have made a net zero commitment, the most common target was to achieve net zero by 2030<sup>10</sup>. While these commitments are broadly encouraging, there are striking inconsistencies in what each commitment means, primarily relating to the calculation methodology, the necessity of ambitious emissions reduction plans and in the quality of the carbon credits used.

Many targets focus on ‘operational’ emissions only. These include electricity, heat, and potentially transport emissions. Focusing only on these emissions leaves out those climate impacts linked to the full value chain of upstream and downstream emissions, such as those essential to the production of a hot meal in a restaurant. These value chain emissions are precisely the areas in the majority of the climate impact resides<sup>11</sup>. Therefore, these are the categories with the greatest mitigation and reduction potential. These are also the sources that are often assumed to be included when organisations make net zero claims.

It is incomprehensible to claim to be a net zero restaurant if your claim does not count the food on the table, the drink in the glass, or waste in the bin.

For these reasons it is essential for restaurants to include the climate impact of the full value chain when making commitments linked to Net Zero.

The whole supply chain of the hospitality sector is conservatively estimated to be responsible for 15% of greenhouse gas emissions in the UK<sup>12</sup>. However, currently there is no standard by which the full supply chain of emissions linked to hospitality businesses can be consistently assessed. This has led to some confusion within the industry, and conflicting advice on which component parts should be included within climate accounting methods.

4. United Nations Framework Convention on Climate Change, ‘Paris Agreement,’ 2015, [https://unfccc.int/files/essential\\_background/convention/application/pdf/english\\_paris\\_agreement.pdf](https://unfccc.int/files/essential_background/convention/application/pdf/english_paris_agreement.pdf).

5. ‘IPCC, 2021: Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Masson-Delmotte, V., P. Zhai, A. Pirani, S. L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M. I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J. B. R. Matthews, T. K. Maycock, T. Waterfield, O. Yelekçi, R. Yu and B. Zhou (Eds.)]. Cambridge University Press. In Press.’ From: Summary for Policy Makers (pg. 37)

6. Ibid. From Main Report (pg. 218)

7. UK Government, ‘UK Enshrines New Target in Law to Slash Emissions by 78% by 2035’, GOV.UK, April 2021, <https://www.gov.uk/government/news/uk-enshrines-new-target-in-law-to-slash-emissions-by-78-by-2035>.

8. Broadway Initiative, ‘SME Discovery Phase Publication Report,’ April 2021, <https://irp.cdn-website.com/ba38e7c3/files/uploaded/SME%20discovery%20phase%20publication%20report.pdf>.

9. BSI, ‘Net Zero Barometer Report,’ January 2021, <https://www.bsigroup.com/globalassets/global/bsi/net-zero-barometer-report.pdf>.

10. Ibid.

11. GHG Protocol and Carbon Trust, ‘GHG Protocol - Technical Guidance for Calculating Scope 3 Emissions’, 2013.

12. Kate Scott, Anne Owen, and John Barrett, ‘Estimating Emissions Associated with Future UK Consumption Patterns,’ A Report for the UK Committee on Climate Change, 2013.

**Foreword.**

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The Net Zero Restaurant initiative has been designed to help address these challenges: to bring consistency to what Net Zero means for restaurants and to raise awareness of the true climate impact of the sector.

Our goal is to create a pragmatic and effective guide for Restaurants to achieve Net Zero. This protocol will be practical for use in the current post-COVID conditions, and ambitious in its scientific robustness - offering businesses a realistic method of achieving credible sustainability goals, in line with the science based targets mandated by the Paris Agreement.

The need for urgent, strong action has never been greater, and this Protocol aims to help turn commendable ambition in to a practical reality.

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**The best time to go net zero  
was 20 years ago, the next best  
time is now.**

**Net Zero Now, September 2021**

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# About the Partners.

## Our Partners

Net Zero Restaurants is a Net Zero Now initiative. The climate crisis requires a response that is both broad and detailed, that engages everyone and enables everyone to participate.

This could never be achieved working alone and Net Zero Now is grateful for the support received from collaborating partners that share our ambition for a net zero global economy.

The Net Zero Restaurants initiative has been made possible by the support of industry development partners Coca-Cola Euro-pacific Partners and Pernod Ricard UK.

Our strategic partner, Good Business, has been instrumental in guiding the development and technical partners Food Made Good.



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"We can all set targets individually – as we have for CCEP to reach net zero by 2040 – but to really shift the dial, we need to work together as an industry. The initial pilots have generated some great learnings and insights, helping to shape clear guidelines for restaurants of all sizes to reduce emissions. With the Net Zero Pubs and Bars protocol's already helping some of our customers accelerate their carbon reduction journeys, we're thrilled to be able to support even more of the hospitality sector on the road to zero."

**Julian Hunt, Vice-President, Public Affairs,  
Communications and Sustainability at CCEP GB**

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The initiative will be administered and delivered to the sector by the Sustainable Restaurant Association.

A wide range of stakeholders were invited to participate in the consultation, with representatives from academia, third sector, government agencies, trade associations and business. Their feedback has helped shape the Protocol and ensure broad based endorsements.



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"As the world grasps the urgency of the climate crisis, increasing numbers of businesses are seeking guidance on what net zero means for them and how to get there. We hope the tools provided by the Net Zero initiative will inspire our customers to take action and join the race to Net Zero."

**Ian Peart, Commercial Director at  
Pernod Ricard UK**

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## About the Partners.

### Net Zero Now

Net Zero Now (NZN) aims to provide the infrastructure and guidance to help organisations take climate action now. It does this by offering sector-specific tools and software to organisations.

#### Defining Net Zero

The last few years has witnessed a proliferation of terms and phrases used in relation to sustainability, climate action and reducing the impact of greenhouse gases. One of the key purposes of this Protocol is to develop a sector-wide definition of what Net Zero means to restaurants.

Net Zero Now and the Net Zero Restaurants Protocol are aligned with the definitions of Net Zero provided by SBTi Net Zero Standard<sup>13</sup>.

- Reducing scope 1, 2, and 3 emissions to zero or to a residual level that is consistent with reaching net-zero emissions at the global or sector level in eligible 1.5°C-aligned pathways
- Neutralizing any residual emissions at the net-zero target year and any GHG emissions released into the atmosphere thereafter

There are a number of differences between this definition and other definitions of terms such as Climate or GHG Neutrality. The following principles distinguish the key characteristics of Net Zero.



#### The 5 Principles of Net Zero Now

1

Emissions must be calculated in accordance with the appropriate GHG Protocol methodology and include all Green House Gasses (GHGs)

2

Emissions in scope must include all relevant value chain sources (inc. scope 1,2 and 3)

3

Emissions reduction targets are mandatory and must be compliant with SBTi ambition criteria and accompanied by credible delivery plans. These must be enacted from Year 1.

4

Businesses must share details of their climate plans and action transparently and advocate for widespread adoption of paths to Net Zero.

5

Where carbon offset instruments are used they must be certified to recognized international standards and aligned in composition with the Oxford Principles on Net Zero Aligned Carbon Offsetting.

13. SBTi Corporate Standard, 2021, <https://sciencebasedtargets.org/resources/files/Net-Zero-Standard.pdf>

# Further Information.

## Structure

The Protocol is structured to provide an accessible entry point that introduces key concepts before expanding on them in subsequent sections to offer increased detail and complexity.

**Section 1: Introduction** provides an overview of the purpose, scope, and principles of the Protocol.

**Section 2: Going Net Zero** provides an overview on the implications and significance of going net zero, while presenting a step-to-step framework to achieve the Net Zero Restaurants certification.

**Section 3: Detailed Guidance** offers a detailed breakdown of the action required to achieve the Net Zero Restaurants certification and clarifying the requirements for each step.

## Language

Within the document, the term ‘must’ is used in to indicate a requirement of the Protocol. The term ‘must not’ indicates prohibited actions. The term ‘should’ is used to indicate a Protocol recommendation, but not a requirement.

Throughout this document, the terms ‘business,’ ‘restaurants,’ and “food providers” are used interchangeably to refer to the entity taking part in the Net Zero Certification.

Input is encouraged from all stakeholders interested in climate action within in hospitality industry. Suggestions for changes or futures priorities for the development of the Protocol should be sent to [review@netzeronow.org](mailto:review@netzeronow.org).

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## 1

# Introduction.

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This edition of the Net Zero Restaurants Protocol has been developed as a free and universally accessible standard guide, tailored specifically for food providers within the hospitality industry, which builds on existing GHG accounting standards, scientific evidence, and industry best practice. The aim is to provide a guide for restaurants to follow in order to achieve Net Zero certification.

The protocol provides an approved methodology for the development of a restaurant specific climate strategy. This includes:

- i. The calculation of a restaurant's direct and indirect GHG emissions,
- ii. Setting targets based on the Science Based Targets Initiative and creating associated emissions reduction plans,
- iii. The purchase of credible and robust carbon offset credits.
- iv. Communication of actions and results in a clear and transparent manner

Restaurants that follow this methodology are eligible to receive Net Zero Restaurants certification.

The Protocol has been developed following thorough peer-review with multiple stakeholders from the food industry and the sustainability sphere. It will be updated regularly to include the most recent advances in the science and best practice concerning sustainability in the food service industry.

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## 1.1 Purpose of the Protocol

The Net Zero Restaurants Protocol provides a set of requirements, guidance, and recommendations for restaurants to build strong, credible, and transparent net zero businesses that are recognised globally by both industry and patrons.

The goal of this document is to provide a step-by-step approach to help restaurants understand their direct, indirect and value chain emissions, focusing on the biggest GHG emissions reduction opportunities, and helping them offset residual emissions to achieve carbon net zero.

This document aims to assist the hospitality industry on the road to **Net Zero by 2030**.

The Net Zero Restaurant Protocol is designed for:

- Restaurants to understand what is required to achieve the Net Zero Restaurants certification.
- Restaurants to understand the variety of benefits Net Zero can offer their operations: within multiple departments such as finance, sustainability, and communications.
- The wider hospitality sector, to clarify what 'net zero' means for the sector, while ensuring collaboration on best practice to reduce emissions.
- Assessors to understand what is required to ensure consistency of certification requirements.

## Introduction.

### 1.2 Guiding Principles of the Protocol

The principles that instruct the construction of the Net Zero Restaurants Protocol are the following:

#### Inclusive

To move the wide hospitality sector towards Net Zero no part of the sector can be left behind. Restaurants are often deterred from participating in carbon measurement and target setting due to the complexity attached to the process. This protocol has been designed to be accessible and achievable for any type of Restaurants, regardless of size or scale.

#### Pragmatic

The protocol is primarily concerned with accelerating progress towards a wider net zero sector. Outputs have been designed to balance this ambition with what is practical and achievable. In order to avoid increased complexity existing standards are adopted where possible.

#### Action orientated

Participation must lead to action. This is not an academic exercise, and the focus is not on documenting the status quo but on validating effective change. Immediate action is necessary to guide the sector as a whole to Net Zero by 2030.

#### Transparent

To eliminate confusion and inconsistency, transparency is key. This protocol aims to allow businesses to make public claims and commitments with confidence. This confidence is built after following the documented methodology which underpins the protocol.

### 1.3 Who should use the Protocol?

The Net Zero Restaurants Protocol is applicable for all hospitality businesses which identify as restaurants or food serving establishments. It forms part of a range of protocols covering the wider Hospitality industry, including Net Zero Pubs, Net Zero Bars and Net Zero Catering. For more information about these initiatives, please visit [NetZeroNow.org](https://NetZeroNow.org).

While this Protocol is relevant for businesses of all sizes and types, it has been created specifically with SMEs in mind. While the standards within this Protocol are relevant globally, this document has been created specifically for the UK market.

### 1.4 Greenhouse Gases

#### Greenhouse Gases

Global warming occurs due to Greenhouse Gases (GHG) accumulating in the atmosphere. GHG are gases which contribute differing levels of radiative energy in the atmosphere. The concept of Global Warming Potential (GWP) was developed to allow comparisons of the global warming impacts of different gases. Specifically, it is a measure of how much energy the emissions of 1 ton of the gas will absorb over a given period of time, relative to the emissions of 1 ton of carbon dioxide (CO<sub>2</sub>). The larger the GWP, the more that each gas warms the Earth compared to CO<sub>2</sub> over that time period. The time period most frequently used for GWPs is 100 years.<sup>14 15</sup>

An example of the three most common GHGs and their GWP are listed in Figure 1 below:

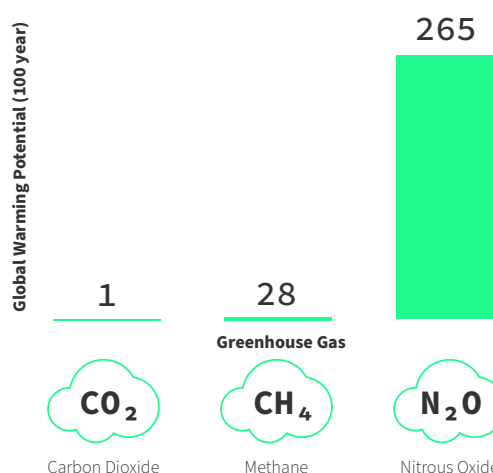


Figure 1. Global Warming Potential of Greenhouse Gases

These numbers state that, with regards to their contribution to Climate Change and 'The Greenhouse Effect', methane is 28x more potent than CO<sub>2</sub>, whilst nitrous oxide is 265x more potent than CO<sub>2</sub>. For a full set of GWP, refer to the IPCC Fifth Assessment Report.<sup>16</sup>

In addition to these, there are several other gases such as freons, hydrochlorofluorocarbons, tetrafluoroethenes, trifluorides, hexafluorides are used in refrigerants, aerosols, and various industrial processes. While these gases are produced in much smaller quantities than the three gases listed above, they are extremely potent. These gases have between 1000x – 24,000x greater GWP than CO<sub>2</sub>.

14. IPCC, Climate Change 2014: Synthesis Report, ed. R. K. Pachauri and Leo Mayer (Geneva, Switzerland: Intergovernmental Panel on Climate Change, 2015).

15. OAR US EPA, 'Understanding Global Warming Potentials,' Overviews and Factsheets, US EPA, 12 January 2016, <https://www.epa.gov/ghgemissions/understanding-global-warming-potentials>.

16. IPCC, 'Fifth Assessment Report,' 2014, <https://www.ipcc.ch/assessment-report/ar5/>.

## Introduction.

### 1.5 What is not in the Scope of this Protocol

This Protocol recognises the importance for companies to holistically approach sustainability and corporate social responsibility. However, the Net Zero Restaurants certification is solely and purposefully focused exclusively on climate impacts and is complementary to other sustainability metrics.

There are a variety of tools, models, and frameworks available for businesses to develop a more systemic approach and explore the full range of social, ethical, and economic factors at play and the interrelationship between them.

Figure 2 shows the 17 Sustainable Development Goals.<sup>17</sup>

## SUSTAINABLE DEVELOPMENT GOALS



Figure 2. The 17 Sustainable Development Goals

The most widely used and well known metric for measuring holistic sustainability are the UN Sustainable Development Goals (SDGs). These are a collection of 17 interconnected goals that are necessary to improve and sustain life on this planet for everyone equally. The SDGs were designed to be carried out by a wide range of stakeholders – governments, the private sector and civil society - in a collaborative partnership.

The SDGs have been built in to the Sustainability Framework developed by the Sustainable Restaurant Association, seen in Figure 3. Further information about the framework's principles, application and functioning can be found at <https://foodmadegood.org/framework>.

<sup>17</sup>. THE 17 GOALS | Sustainable Development', accessed 27 May 2021, <https://sdgs.un.org/goals>

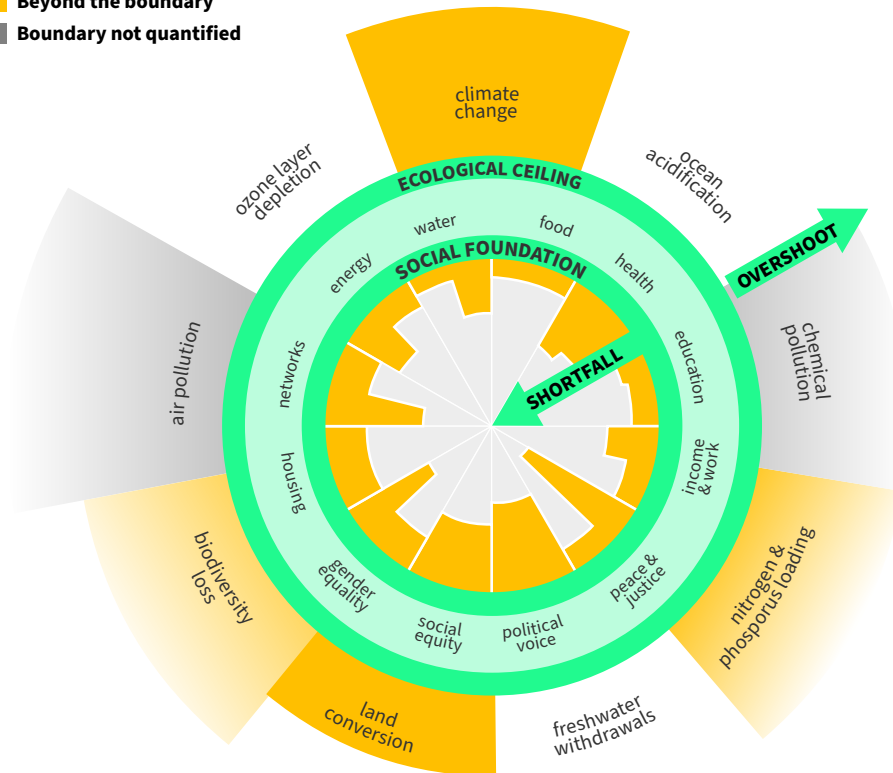
## 1

## Introduction.



Figure 3. The SRA Licensed Premises Sustainability Framework

- Beyond the boundary
- Boundary not quantified

Figure 4. Doughnut Economics Infographic, Kate Raworth 2017<sup>18</sup>

Another useful metric when considering the wider sustainability picture is displayed in figure 4, depicting the 'Doughnut' created by Oxford Economist, Kate Raworth. The Doughnut depicts the social and environmental factors that must be managed to ensure the safe and equal distribution of resources globally. There are 12 social foundations and 9 ecological boundaries which are recognised within this metric. Within the ecological factors, Climate change is one of several factors that require urgent action.

18. Kate Raworth, Doughnut Economics: Seven Ways to Think like a 21st Century Economist, Book, Whole (White River Junction, VT: Chelsea Green Publishing, 2017), [http://uu.summon.serialssolutions.com/2.0.0/link/0/elvHcXmwdZ07C8lwEMcPH4NuPvGxX0CJaVLTUUQRQScnF0maK7q41lof31xtUQTHJBBYEO5\\_9wwAf04JE1\\_fALTAtFnPlgYN9zouRFah76Ta7RKWb3Z\\_U8qB2e7X-1Mvaa6zpNxyqvkgnXzGDyK451Tq4zxv0QUAbhPP5lqgLZ95U-vIOi703nPJ2SscmX7qxqUGJWII6FPDWgEoAcndNqFPgerkl9wnmnS0Yb9bH1XaaJOfsUOX8puKydfA2IfYyj2YsACTNEKGHJWJlA5c-iOjhRceDUKUrAudf7P0\\_g\\_1ocpJTtLufwDlyG1NHJJRo9T4Fyy2Xig](http://uu.summon.serialssolutions.com/2.0.0/link/0/elvHcXmwdZ07C8lwEMcPH4NuPvGxX0CJaVLTUUQRQScnF0maK7q41lof31xtUQTHJBBYEO5_9wwAf04JE1_fALTAtFnPlgYN9zouRFah76Ta7RKWb3Z_U8qB2e7X-1Mvaa6zpNxyqvkgnXzGDyK451Tq4zxv0QUAbhPP5lqgLZ95U-vIOi703nPJ2SscmX7qxqUGJWII6FPDWgEoAcndNqFPgerkl9wnmnS0Yb9bH1XaaJOfsUOX8puKydfA2IfYyj2YsACTNEKGHJWJlA5c-iOjhRceDUKUrAudf7P0_g_1ocpJTtLufwDlyG1NHJJRo9T4Fyy2Xig).



Introduction.

1.6 Quality of Data and selection of Data Sources

Good quality data is the foundation of accurate climate accounting. It is the foundation upon which decisions linked to emissions reductions can be made. The GHG Protocol Corporate Standard is the most common international framework for climate accounting.

***“the most common approach for calculating GHG emissions is through the application of documented emission factors. These factors are calculated ratios relating GHG emissions to a proxy measure of activity at an emissions source”<sup>19</sup>***

Emissions calculations are therefore based on a combination of Activity Data that capture the quantity or volume of activity at a source and Emissions factors that allocate an amount of carbon dioxide equivalent for each unit of that activity.

Organisations should seek to use the highest quality data available, but also approach the journey towards good quality data is an ongoing process that will improve over time.

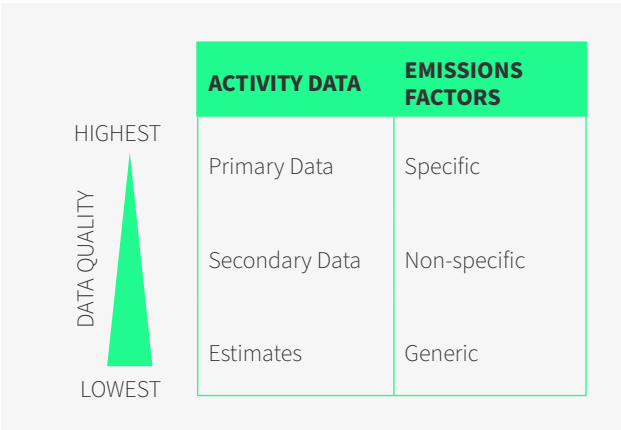


Figure 5. Data quality metric

Lifecycle analyses, or ecological footprinting across Scope 3 emissions (products and services) at the product level is a relatively novel area. The availability of emissions factors is a rapidly increasing field of research.

Data sets used to calculate emissions must be reputable and open to transparent inquiry. The robustness of the data sets is

essential for the calculations to be trusted. Data sets must come from either:

- a. Government sources
- b. Peer reviewed research from quality academic journals
- c. Industry benchmark data
- d. A dataset listed on Open LCA ([nexus.openlca.org/databases](https://nexus.openlca.org/databases))
- e. A specific, full LCA carried out by an accredited third party

An up-to-date list of the data sources used in the Net Zero Restaurants Protocol can be found online at [www.netzeronow.org/restaurant](https://www.netzeronow.org/restaurant).

In all cases, the source of the data must be referenced clearly within the calculation document, to ensure full transparency. When using benchmark data, the methodology must be sent to the Assessor to ensure it is valid.

‘Spend data’ emissions factors may be used in exceptional circumstances when data is otherwise impossible or impractical to source. Care should be taken to ensure that practices are put in place to ensure spend data (using £ spend as a proxy for weight or specific units) is limited in use, as this data has variable levels of accuracy.

As with all use of this Protocol, it is important not to intentionally mislead or miscalculate emissions. In cases where there is doubt which emissions factor to use, a precautionary principle should hold. The precautionary principle states that if there are any questions over which emissions factor to refer to, the highest figure should be used.

19. GHG Protocol, 'Corporate Value Chain Accounting Report Standard.'

## 2

# Going Net Zero.

## 2.1 What is Net Zero?

Climate change is a global crisis, the severity of which increases each year. The Intergovernmental Panel on Climate Change (IPCC) is insistent that we must limit the rise in average temperatures to 1.5°C (maximum) from pre-industrial levels to avoid a catastrophic impact. However, on current projections this temperature is expected to be exceeded as early as 2030 and will be reach up to 4°C by the end of the 21st century. In the IPCC SR15 report (2018), the IPCC state that the only way to limit the damage to the environment is to move beyond the current focus on incremental reductions in emissions, and rapidly shift to a low-GHG economy.<sup>20</sup>

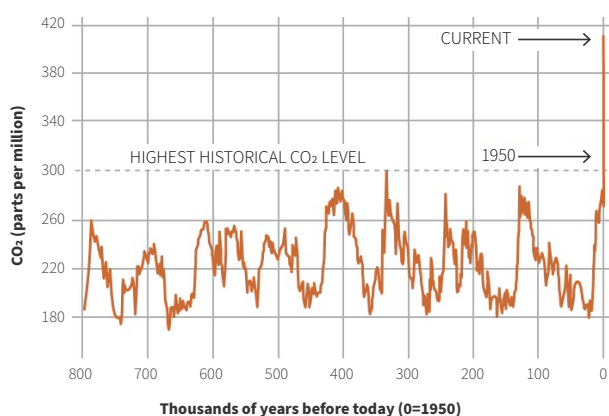


Figure 6. Historical trends of CO<sub>2</sub> emissions in the Earth's atmosphere (Nasa, 2021)<sup>21</sup>

Figure 6 shows the long term change of CO<sub>2</sub> in the atmosphere. The increased levels of CO<sub>2</sub> in the atmosphere over the last century are not part of the regular climate cycles that have taken place over the last 800,000 years.<sup>22</sup>

In 2018 alone, it was estimated that human actions added 55 gigatons (55 million tons) of GHG (CO<sub>2</sub>e) to the atmosphere. In 2018, removals of CO<sub>2</sub>e by human action were effectively zero. The result of decades of large imbalances such as this has been increasing concentration of GHG in the atmosphere. While GHG emissions may have reduced, or stalled during COVID disruption, emissions have continued to grow to record cumulative levels.

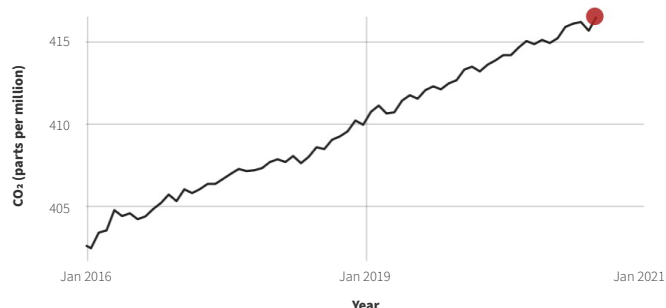


Figure 7. CO<sub>2</sub> concentration in the atmosphere in time period (2016 – 2021)

When modern CO<sub>2</sub> records were first captured, in 1958, atmospheric CO<sub>2</sub> was measured at 315 ppm. Since the Paris Agreement was signed in December 2015, the atmospheric concentration of CO<sub>2</sub> in the atmosphere has increased from 403 parts per million (ppm) to 417 ppm in Summer 2021.

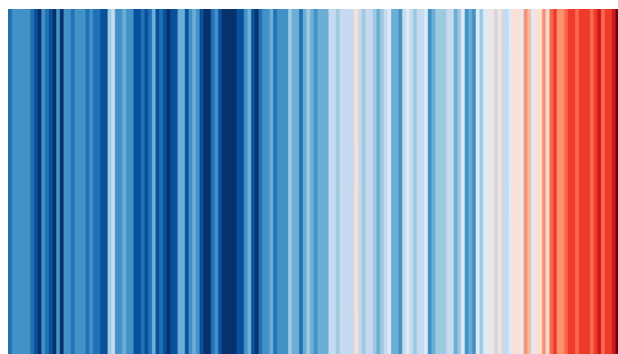


Figure 8. 'Show Your Stripes'<sup>23</sup>

Figure 8 shows the 'warming stripe' graphic for global temperatures over the last century. The stripes are a visual representation of the change in temperature as measured over the past 100+ years. Each stripe represents global temperatures averaged over a year, with blue being colder and red being hotter. The last twenty years (on the far right of the image) demonstrates how temperatures have been consistently increasing and are at the highest average point currently.<sup>23</sup>

20. IPCC, 'Global Warming of 1.5°C', 2018, <http://www.ipcc.ch/report/sr15/>.

21. [www.climate.nasa.gov/vital-signs/carbon-dioxide/](https://climate.nasa.gov/vital-signs/carbon-dioxide/)

22. NASA Global Climate Change NASA, 'Carbon Dioxide Concentration | NASA Global Climate Change', Climate Change: Vital Signs of the Planet, 2021, <https://climate.nasa.gov/vital-signs/carbon-dioxide>.

23. Manish Karkera (Institute for Environmental Professor Ed Hawkins (University of Reading), 'Show Your Stripes,' <https://showyourstripes.info/>, accessed 16 September 2021, <https://showyourstripes.info/>.

## 2

**Going Net Zero.**

The IPCC AR6 Report (2021) has outlined how climate change will impact on people in every region around the world, including Western Europe (which has already experienced heat extremes, heavy precipitation, and intensive droughts due to anthropogenic climate change).

The UK Climate Change Committee has made clear that the long-term goal is to reduce anthropogenic GHG emissions to absolute zero (and to have a 100% reduction in GHG from 1990 levels by the mid-century<sup>25</sup>). In many sectors this long term target will require an interim net zero emissions target in the short term.

The Net Zero economy envisaged by policy makers is one in which the gross emissions associated with human activity are steadily and progressively reduced, while the remaining unavoidable emissions are compensated by activity that offsets their impact on the atmosphere.

For businesses, Net Zero is a pragmatic response to the climate challenge which recognises that reducing human made emissions to absolute zero is not always possible immediately. Instead, organisational effort can be directed towards reducing emissions as far as possible each year, leaving a steadily decreasing quantity of residual emissions. Capital should then be allocated to approved offsetting programs which remove a quantity of GHG from the atmosphere, equivalent to these residual emissions.

Climate Compensation is a vital process in achieving Net Zero due to the difficulty in removing all GHG emissions from the supply chain immediately. This Net Zero Now protocol provides a realistic approach for hospitality businesses to engage with the net zero transition through the progressive gradual reduction of emissions on an annual basis and eventual allocation of capital to programmes that can offset the impact of residual emissions once long term targets have been achieved.



25. UK Climate Change Committee, 'Net Zero - The UK's Contribution to Stopping Global Warming,' 2019, <https://www.theccc.org.uk/publication/net-zero-the-uks-contribution-to-stopping-global-warming/>.

## Going Net Zero.

### 2.2 Net Zero in the Hospitality Industry

#### Global Agriculture

As a hugely influential market sector, the food and beverage industry will play a vital role in bringing about positive environmental change across the planet. It plays the dual role of one of the largest causes and one of the largest casualties of climate change. As the United Nations Development Programme states,

***“[agriculture] is both one of the central causes of, and answers to the climate crisis.”<sup>26</sup>***

Climate change will cause significant disruption to the supply chain of the food and beverage industry, driving food insecurity and nutritional shortfalls globally. It is expected that the impacts of climate change will lead to increased inflation of food and drinks prices, resulting in poor viability of many offerings and a reduced selection of available produce for the consumer<sup>27</sup>. The knock on impacts of this are likely to be catastrophic, with widespread hunger, forced migration, and civil unrest globally.

Some of the key negative impacts that agriculture causes the climate include<sup>28</sup>:

- Release of nitrous oxide through the excessive use of fertilisers
- Release of CO<sub>2</sub> from farming equipment and transportation of goods
- Release of potent methane from cattle farming
- Damage to the natural CO<sub>2</sub> capturing ability of soil and natural vegetation

In 2015, the United Nations agreed on 17 Sustainable Development Goals (SDGs) that all nations should seek to achieve by 2030. Sustainable Consumption and Production (SDG #12) and Climate Action (SDG #13), are particularly relevant to the global food and beverage industry.

Agriculture accounts for approximately 20% of global greenhouse gas emissions. In addition to this the additional emissions required to convert harvested agriculture into viable food and drink products increases the impact of the sector further<sup>29</sup>.

An effective practice for reducing the emissions of this sector is reducing consumption of high emitting food and beverage products, resulting in a reduction in revenue for the producers. Many of the most high-intensity agriculture practices are linked to livestock practices, in particular those involved in bovine (cow) husbandry. It is expected that governments will create incentives for consumers to move away from these products. There is therefore a high incentive for producers to invest in emission reduction and offsetting projects now.

#### UK Restaurants

A large number of restaurants and food service enterprises operate within the UK. As recently as 2019, there were around 90,000 separate restaurant enterprises operating within the UK. While COVID and the last two difficult years of business will inevitably impact this number, it is clear that the UK as a nation is culturally linked to ‘eating out’. Total restaurants numbers are expected to rebound (albeit slowly) and begin to increase above pre-covid numbers again by 2024.<sup>30</sup>

While the restaurant sector has some large nation-wide groups, it is dominated by a substantial number of independent sites. SMEs across the United Kingdom have repeatedly asked for more assistance, guidance, and advice on meeting Climate Targets, specifically those related to Net Zero. While around half of larger businesses have set Net Zero targets, fewer than 1 in 3 of SMEs have currently set targets, and around the same proportion are not familiar with what Net Zero means to them in practice<sup>31 32</sup>.

The nature of the hospitality industry means that profit margins are extremely tight. Even without COVID-19 interruptions, thousands of restaurants close in the UK each year. Because of this extremely high turnover in operations, it is important to consider more short and medium term sustainability goals.

#### **Why make a 2050 target when a huge number of organisations will not even remain in operation in 2030?**

This need for immediate action and seizing the initiative in current sustainability targets is one of the primary inspirations for the Net Zero Restaurants Protocol.

26. 8 May 2021, <https://stories.undp.org/transforming-food-and-agriculture>.

27. Climate Action | World Food Programme, accessed 18 May 2021, <https://www.wfp.org/climate-action>.

28. European Environment Agency, 2015, European Environment - state and outlook 2015: Agriculture. Eurostat, 2014. Statistics Explained - Agricultural production. <https://www.eea.europa.eu/signals/signals-2015/articles/agriculture-and-climate-change>

29. ‘Transforming Food and Agriculture - United Nations Development Programme | UNDP’, Exposure, accessed 18 May 2021, <https://stories.undp.org/transforming-food-and-agriculture>.

30. ‘UK: Number of Restaurants’, Statista, 2021, <https://www.statista.com/statistics/298871/number-of-restaurants-in-the-united-kingdom/>.

31. BSI, ‘Net Zero Barometer Report.’

32. Broadway Initiative, ‘SME Discovery Phase Publication Report.’

## Going Net Zero.

### The future of Net Zero in the Hospitality Industry

Given the chemical processes that take place during food and beverage production, reducing GHG emissions to absolute zero in these processes is not currently feasible. Figure 9, below shows the UK Climate Change Committee's estimation for the distribution of GHG emissions across sectors of the economy in 2050<sup>33</sup>, with agriculture maintaining a small, but still significant contribution to the total.

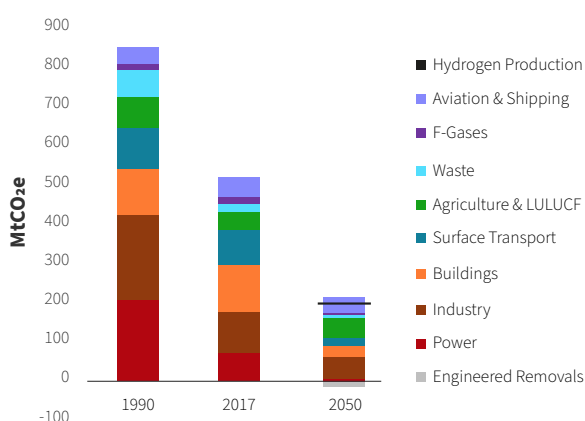


Figure 9. 2050 GHG emissions in the Core scenario, comparing 1990, 2019 and 2050 estimates (UK Climate Change Committee)

This is not to say that there are not effective actions that hospitality businesses can take to lead to large emissions reductions in their operations and value chains. There are significant opportunities around waste reduction and management, energy efficiency and sourcing, decarbonising products and food types, promoting diet shift and, incentivising zero carbon transport for employees and customers.

## 2.3 Why go Net Zero Now?

It is important to recognise that while there is broad consensus to achieve net zero across the UK economy, the level of ambition that it is sought after varies greatly. A target of Net Zero by 2050 is seen by many scientists and climate experts as being too conservative and timid in the face of the urgent need for action<sup>34 35 36 37</sup>. The historical emissions from industrial processes in the UK combined with the current economic resources available has led many experts to call for Net Zero targets to be achieved within the next decade.

The following analysis briefly outlines factors which motivate the reasoning to speed up the timeline for Net Zero targets.

### Ecological

As mentioned in the previous two sections, there is an urgent environmental need to make changes to reduce UK emissions in order to contribute to global GHG emission reductions. Increased GHG in the atmosphere has increased the average temperature across the planet. This Global Heating is causing the ice caps to melt, which raises sea levels across the planet, with some low-lying nations already suffering consequences. The Climate Emergency is leading to severe weather fluctuations around the world, including monsoons and droughts and an extensive list of associated systemic changes.

### Social

This environmental emergency is creating a humanitarian emergency, with over 25 million displaced due to weather related hazards in 2019 alone. The UNHCR expects this to rise to over 200 million each year by 2050<sup>39</sup>. Increased global migration will place added pressure on international infrastructure and political systems. Climate change related weather events have led to flooding, droughts, heat waves, air pollution and various extreme weather events that are life threatening. These events are adversely impacting on citizens' lives now, with whole regions of the country becoming less habitable, leading to the loss of homes and livelihoods.

33. Climate Change Committee, 'Net Zero - The UK's Contribution to Stopping Global Warming,' Page 144.

34. 'Net-Zero Carbon Pledges Must Be Meaningful to Avert Climate Disaster,' Nature 592, no. 7852 (31 March 2021): 8–8, <https://doi.org/10.1038/d41586-021-00864-9>.

35. James Dyke, Robert Watson, and Wolfgang Knorr, 'Climate Scientists: Concept of Net Zero Is a Dangerous Trap,' The Conversation, 22 April 2021, <http://theconversation.com/climate-scientists-concept-of-net-zero-is-a-dangerous-trap-157368>.

36. Kevin Anderson and Glen Peters, 'The Trouble with Negative Emissions,' Science 354, no. 6309 (14 October 2016): 182–83, <https://doi.org/10.1126/science.aah4567>.

37. Joeri Rogelj et al., 'Net-Zero Emissions Targets Are Vague: Three Ways to Fix,' Nature 591, no. 7850 (March 2021): 365–68, <https://doi.org/10.1038/d41586-021-00662-3>; Dyke, Watson, and Knorr, 'Climate Scientists'

## Going Net Zero.

### || Economic

As well as the well reported macro-level economic benefits of mitigating climate change<sup>40</sup>, there are various key business reasons why an organisation should seek to implement a Net Zero strategy.

#### Reduced Business Costs

By monitoring energy and material use, many businesses are able to recognise areas where greater efficiency could occur, reducing inefficiencies and waste and delivering operational cost reductions<sup>41</sup>. Furthermore, reducing the total GHG emissions from the business ensures the cost of climate compensation is minimised.

#### Spur Innovation

A focus on internal sustainability can stimulate innovation within businesses, including efficiencies, innovative use of energy and novel products and services. Sourcing sustainable food and drinks can lead to novel menu options and inspire creativity behind the bar.

#### Meet Customer Demand

As consumers become more knowledgeable on the subject of Climate Change, there is increased expectations on businesses to make a tangible positive impact on the environment through their operations. Consumers are frequently making conscious decisions about their spending and are willing to pay more for sustainable goods and services. There is evidence that consumers are willing to switch brands based on sustainable practices and are more likely to share these decisions with their friends and on social media.<sup>42 43 44 45</sup>

#### Improve Employee Retention

Considering the effects of investing on sustainable practises on employees, researchers have found that employees in companies with strong sustainability programmes had increased morale and loyalty, while the turnover was reduced. Additionally, sustainability positively impacts nearly all traditional dimensions of employee engagement including alignment, discretionary effort, advocacy for the company and pride.

### || Political and Legal

#### Legislation

Many governments have set legally binding targets concerning climate goals<sup>46</sup> and the 2021 landmark legal ruling concerning Shell demonstrates how courts intend to enforce these laws.<sup>47</sup>

In addition to this, new regulation is expected to follow the UK Government's 2021 consultation on the need for all businesses to publish Scope 1,2 and 3 GHG accounts.

Several FTSE 100 companies, cities and governmental organisations have set Net Zero by 2030 targets<sup>48</sup>. There is a growing need for a framework for businesses, and particularly SMEs, that seek to provide a leadership role in setting the benchmark for Net Zero GHG emissions. The Net Zero Now Bar Protocol seeks to provide this framework to businesses in the hospitality sector, in order to achieve Net Zero targets.

40. Climate Change Committee, 'Net Zero - The UK's Contribution to Stopping Global Warming.'

41. Climate Change Committee.

42. Brent F. Kim et al., 'Country-Specific Dietary Shifts to Mitigate Climate and Water Crises,' *Global Environmental Change* 62 (1 May 2020): 101926, <https://doi.org/10.1016/j.gloenvcha.2019.05.010>.

43. Vladas Griskevicius, Joshua M. Tybur, and Bram Van den Bergh, 'Going Green to Be Seen: Status, Reputation, and Conspicuous Conservation,' *Journal of Personality and Social Psychology* 98, no. 3 (2010): 392–404, <https://doi.org/10.1037/a0017346>.

44. Judith de Groot and Linda Steg, 'General Beliefs and the Theory of Planned Behavior: The Role of Environmental Concerns in the TPB,' *Journal of Applied Social Psychology* 37, no. 8 (August 2007): 1817–36, <https://doi.org/10.1111/j.1559-1816.2007.00239.x>.

45. Andrew Gilg, Stewart Barr, and Nicholas Ford, 'Green Consumption or Sustainable Lifestyles? Identifying the Sustainable Consumer,' *Futures* 37, no. 6 (August 2005): 481–504, <https://doi.org/10.1016/j.futures.2004.10.016>.

46. UK Government, 'UK Enshrines New Target in Law to Slash Emissions by 78% by 2035'.

47. Shell: Netherlands court orders oil giant to cut emissions <https://www.bbc.co.uk/news/world-europe-57257982>

48. BSI, 'Net Zero Barometer Report.'



## Going Net Zero.

### 2.4 How to achieve Net Zero

As illustrated in Figure 10 - Net Zero Restaurants certification steps, there are five steps to achieve the Net Zero Restaurants certification. While these steps are set out sequentially, they may be carried out in parallel. An outline approach to each of the steps along with their particular requirements is provided in the next sections.

#### Organisations must:

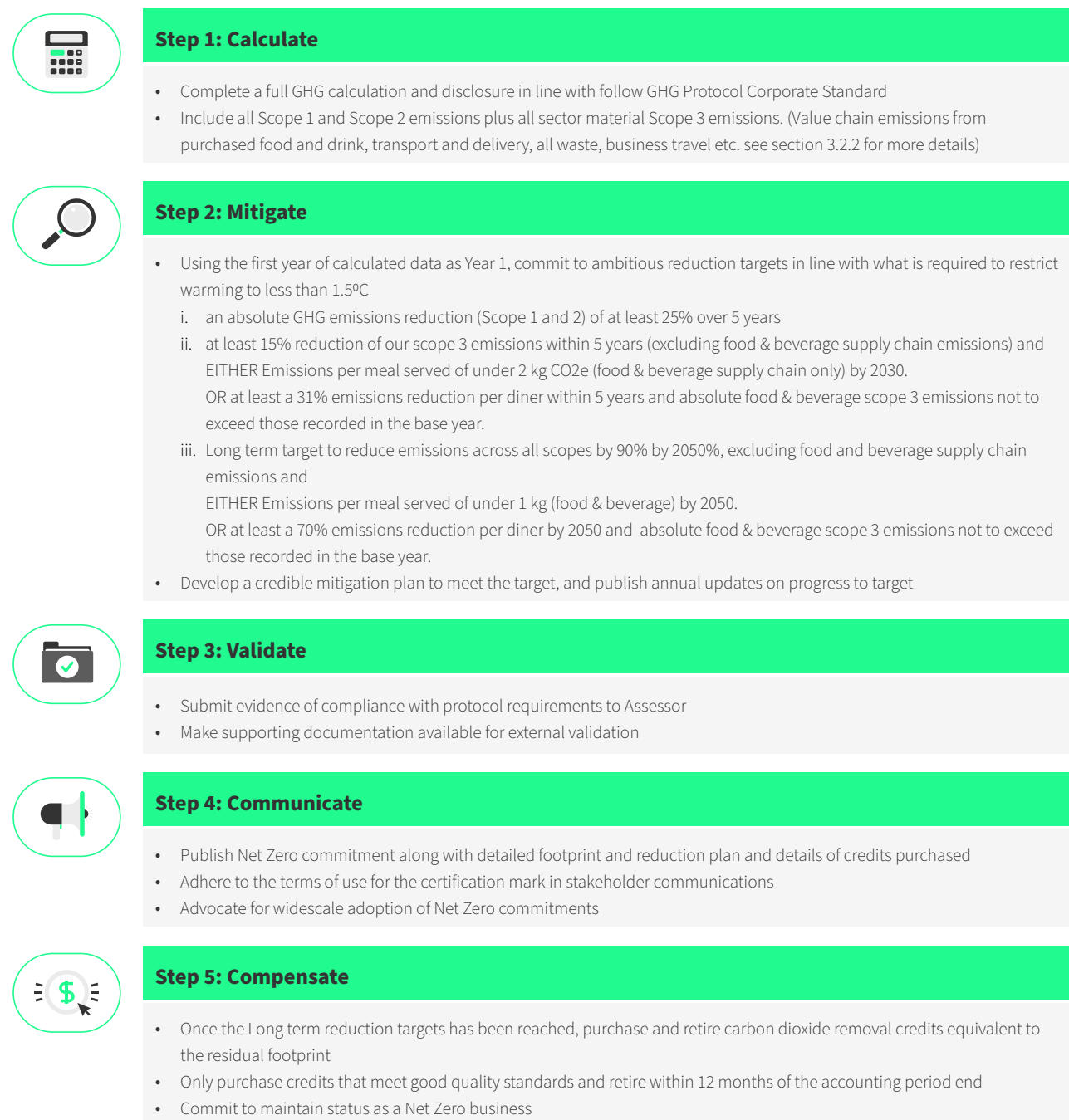


Figure 10. Net Zero Restaurant Certification Steps

## Going Net Zero.



### 2.5 Step 1. Calculate

This section covers the methodology for calculation of GHG emissions consistent with the business achieving the Net Zero Restaurants certification. It is intended to complement and add to the methodology detailed in the GHG Protocol Corporate Standard.<sup>49</sup>

#### Define

The subject to which the Net Zero Restaurants certification is being applied **must** be clearly defined by name and by description of relevant legal and/or physical boundaries. The duration of the time period under consideration **must** be defined and should cover a 12-month period.

For organisations that suffered business disruption during the year they intent to use as a base year, please see box “Atypical trading from business interruption” on page 26 on for details of how to set the period for which emissions **should** be studied. The following information is relevant for all data collection periods.

Organizational boundaries **must** be clearly defined, considering the subject’s circumstances, and **must** be consistent across calculation of GHG emissions covering all three emissions Scopes. The boundaries **must** be a fair representation of the

total GHG emissions of the organisation. Equity share or control approaches to the accounting of emissions **must** be chosen and remain constant throughout the process.

The entities to be covered include all those related with restaurants service.

The definition of the subject **must** remain constant through all the required steps in the Net Zero Restaurants Protocol. If the definition of the subject changes during the certification process, the steps **must** be re-started taking into account the introduced changes.

Figure 11 provides an overview of all the GHG Sources that **must** be included within the calculation of subject GHG emissions. Adopting GHG Protocol terminology, this includes all Scope 1 and Scope 2 emissions, plus the upstream and downstream Scope 3 emissions that are most material for the hospitality industry. Section 3.1 lists these sources in more detail.

All indicated sources **must** be reported and any exclusion and the rationale for the exclusion **must** be clearly indicated in the provided data.

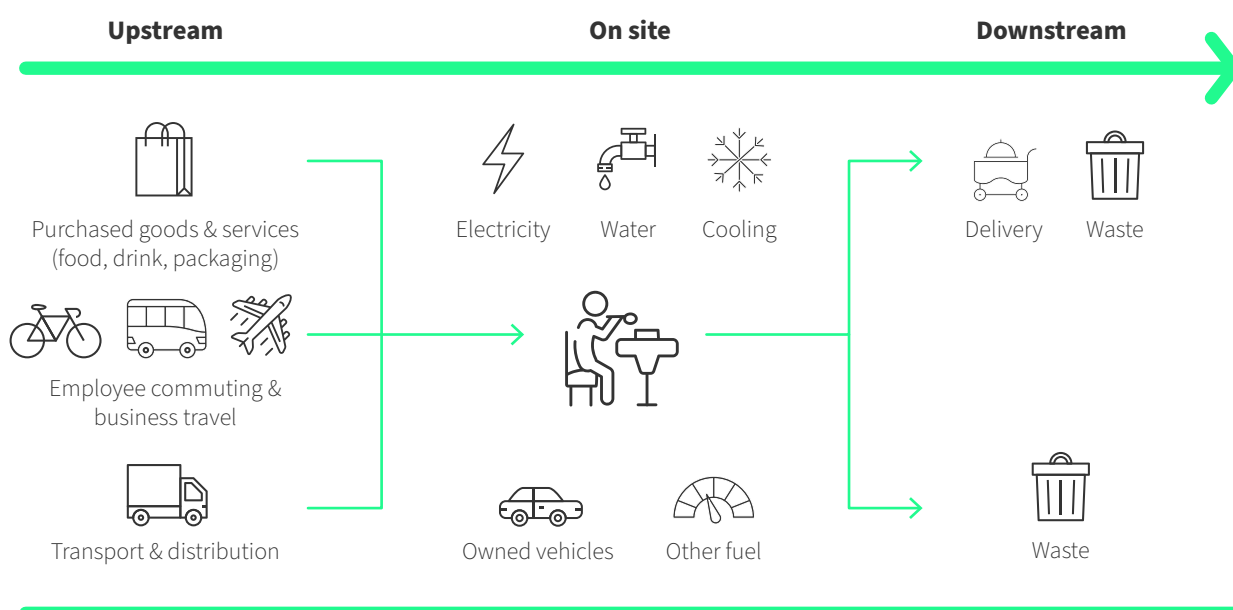


Figure 11. Restaurants Emission Sources

49. GHG Protocol, "Corporate Standard" and "Corporate Value Chain Accounting Report Standard".

## 2

## Going Net Zero.

**Measure**

After defining the subject and establishing the boundaries that will be used throughout the GHG accounting, the GHG emissions of the subject **must** be measured to provide a complete, consistent, and relevant GHG inventory over the defined timescale.

Restaurants GHG emissions **must** be assessed in accordance with the requirements established in this section.

For each of the mandatory sources the subject **must** identify appropriate activity data covering the defined time period and multiply this by appropriate emissions factors.

In many countries the emissions factors covering many of the operations sources are published annually by government (in the UK this service is provided by the Department of Business, Energy, and Industrial Strategy)<sup>50</sup> and the subject **must** use national, regional, international, or other emission factors of relevance, prioritising those most strongly associated with the emission source.

Emissions data **must** be reported in units of GHG or CO<sub>2</sub>e according to the 100-year potential of each gas.

Required emission sources that can be demonstrated to represent a value of less than 0.5% of total emissions for the business (but collectively no more than 5% of total emissions) may be excluded where evidence can be presented to demonstrate that quantification would not be technically feasible, practicable or cost effective. Where a sole source contributes more than 50% of the total emissions, the 95% threshold applies to the remaining sources of emissions.<sup>51</sup>

The method for calculating all purchased goods and service emissions **must** use emissions factors covering all emissions from cradle to retail (point of purchase). The subject **must** complete calculations for all purchased goods and service types that are relevant to their business.

The entity **must** clearly document and explain any estimations and assumptions used in the calculation of the inventory. Where changes have been made to the methodology, these **should** be described in a transparent manner.

In all calculations, entities **must** adhere to the spirit of the Protocol, in attempting to contribute to the global effort to combat the Climate Emergency. Any attempts to deceive, game or mislead during the calculation process will result in the application being denied.

One of the primary benefits of the Net Zero Restaurants Protocol is how it seeks to bring together an otherwise disparate set of emissions factors relevant to business in the hospitality industry. Approved data sets can be found in the online appendix: *Approved standards and methodologies* at [netzeronow.org](https://netzeronow.org). This information will be constantly updated, in order to keep up with the latest field of research in lifecycle assessments.



50. UK Government, 'Greenhouse Gas Reporting: Conversion Factors 2020', GOV.UK, 2020, <https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2020>.

51. Science Based Targets Initiative, 'SBTI Criteria', 2021, <https://sciencebasedtargets.org/resources/files/SBTI-criteria.pdf>.

## Going Net Zero.



### 2.6 Step 2. Mitigate

This section covers the creation and implementation of an emissions reduction target and a framework for taking action to reduce GHG emissions in alignment with the ambition criteria of the Science-Based Targets initiative.

#### || 2.6.1 Set a Target

Reducing emissions is an essential step in the net zero process. The subject **must** set a target to reduce its GHG emissions in-line with the latest science regarding climate change.

To achieve the Net Zero Restaurants certification, the business **must** set a reduction target in compliance with the ambition criteria of the Science Based Targets initiative (SBTi)<sup>52</sup>.

The target **must** consist of at least two parts:-

- i. an absolute GHG emissions reduction (Scope 1 and 2) of at least 25% over 5 years
- ii. at least 15% reduction of our scope 3 emissions within 5 years (excluding food & beverage supply chain emissions) and  
EITHER  
Emissions per meal served of under 2 kg CO<sub>2</sub>e (food & beverage supply chain only) by 2030.  
OR  
at least a 31% emissions reduction per diner within 5 years and absolute food & beverage scope 3 emissions not to exceed those recorded in the base year
- iii. A Long term target to reduce emissions across all scopes by 90% by 2050, excluding food and beverage supply chain emissions and  
EITHER  
Emissions per meal served of under 1 kg (food & beverage) by 2050.  
OR  
at least a 70% emissions reduction per diner by 2050 and absolute food & beverage scope 3 emissions not to exceed those recorded in the base year.

Data from the most recent year should be used as a base year for the reduction calculations, or according to the provisions for business interruption.

#### || 2.6.2 Reduce Emissions

This step covers the actions that may be taken to reduce emissions by the Restaurants with the objective to achieve the targets set in the previous step.

The restaurant **must** provide an achievable carbon emissions reduction plan to meet the emissions targets set. The largest sources of emissions **should** be prioritised, and cost-effectiveness of the measures **should** be taken into consideration, regarding alternative emission reduction actions.

The methodology used to forecast GHG emissions reductions **should** align with that used to quantify the original GHG emissions, and therefore the same principles apply.

GHG reduction plans **must** be reviewed at least annually and progress against planned actions **must** be tracked. Feasibility assessments of possible additional action **should** be undertaken to ensure that the required reduction targets are met. A director or senior manager **should** be responsible for the development and implementation of the emission reduction plan.

A guide to the actions that may be considered to reduce emissions is outlined online at [www.netzeronow.org/restaurants](https://www.netzeronow.org/restaurants).

52. Science Based Targets Initiative, 'Towards a Science Based Approach to Climate Neutrality in the Corporate Sector (Draft for Comments)', 2020, <https://sciencebasedtargets.org/resources/legacy/2019/10/Towards-a-science-based-approach-to-climate-neutrality-in-the-corporate-sector-Draft-for-comments.pdf>.

## Going Net Zero.

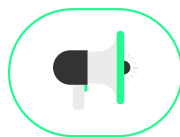


### 2.7 Step 3. Validate

After performing the three activities that concern the calculation, Target setting and action plan for GHG emissions produced by a restaurant, the last technical step towards the Net Zero Restaurants certification is for a qualified third party (the assessor) to assess and validate the conducted activities.

The subject business **must** submit all the required information, as stipulated in the Protocol, to achieve the Net Zero Restaurants certification to this assessor.

The assessor will review the documentation and award the certification to the subject business if all requirements are met. The assessor may require further detail in any of the areas within the documentation. The subject business **must** provide any required information in order to successfully achieve the certification.



### 2.8 Step 4. Communicate

The final step consists of making accurate, transparent, and relevant information about the details and process of becoming a Net Zero Restaurant available to all stakeholders and using the certification to engage stakeholders.

The Net Zero Restaurant certification marks are the main tool provided to communicate the net zero status of the business to stakeholders. The ability and right to use the certification mark is dependent on the ability of the business to complete all the certification requirements successfully.

Once certified, restaurants **should** use the mark to communicate their actions and raise awareness of their status. All communications **must** be factually based, providing clarity and transparency about the procedures and results achieved to avoid misunderstandings. The use of the Net Zero Restaurants certification marks **must** comply with the requirements and guidance stipulated on its use.

Restaurants participating in the Net Zero Restaurants certification **must** disclose all GHG inventory metrics related to the certification, including gross emissions, targets, reduction activities, current progress to targets, and details of carbon credits. These will be shared openly on [netzeronow.org](https://netzeronow.org) to ensure full transparency across the sector.

Restaurants **must** ensure that all claims are consistent with any national or regional guidance or legislation concerning green claims. The Green Claims Code from the Competitions and Markets Authority is a useful guide for ensuring claims are honest and clear<sup>53</sup>. See Section 3.5.1 for more details on making robust environmental claims.

53. 'Green Claims Code – Get Your Green Claims Right. <https://Greenclaims.Campaign.Gov.Uk/> accessed 28 September 2021, <https://greenclaims.campaign.gov.uk/>.

## 3 Detailed Guidance.

This chapter aims to provide more detailed and technical information of how to achieve Net Zero, using the same structure as laid out in the previous section.

- i. Calculate
- ii. Mitigate
- iii. Compensate
- iv. Validate
- v. Communicate

A full list of sources, the methodology and data sets can be found in online appendices at [netzeronow.org](https://netzeronow.org).

### 3.1 Calculate

Calculating emissions requires the use of two types of data: activity data and emission factors.

“Activity data” is a quantitative measure of a level of activity that results in GHG emissions (for example, litres of fuel consumed, or kilograms of material purchased).

An “emission factor” is a factor that converts activity data into GHG emissions data (for example kg CO<sub>2</sub> emitted per litre of fuel consumed, or kg CO<sub>2</sub> emitted per kilograms of food produced).

Restaurants **must** follow the guidelines for setting organisational and operational boundaries set out here and in Chapters 3 & 4 of the GHG Protocol.<sup>54</sup>

#### Organisational Boundaries

Restaurants **must** define the organisational entity that is the subject of the certification. Certification requirements apply to this entity as well as any subsidiaries.

Restaurants operating under the same commercial name or brand but under different ownership (e.g., franchises) **must not** apply to the certification individually and **must** be considered as single entities.

Restaurants operating in multiple countries, even if they are under the same brand, are considered as different organisations for each country and **must** apply separately.

Within chain operations, all sites that operate under the same brand **must** contribute data to the certification process. Organisational control can be set as financial or operational,



and the following activities and sites **must** always be included to achieve a Net Zero Restaurants certification<sup>55</sup>:

- Any Restaurants directly managed by the certification holder, or that operates under the same brand, which contributes to the activities performed at the restaurant (e.g., offices, logistic centres, Restaurants).
- Any upstream and downstream activities performed by third parties that are necessary to the functioning of the premises (e.g., transportation, storage, take-away service etc.)

The Net Zero Restaurants certification is held by the certificate holder, and it is not transferrable to other supply chain entities.

#### Operational boundaries

Emissions inventories **must** include activities of any site managed by the organisation that form part of its operations (e.g., production kitchens, offices, logistic centres) as well as the upstream and downstream activities performed by third parties that are necessary to the functioning of the restaurant (e.g. transportation, storage, take-away service)

An illustration of the required upstream, on site and downstream emissions can be found at Figure 7 and is defined in more detail in Figure 8.

Restaurants **must** account for all the emissions from sources identified as “required” in Figure 8. This includes all scope 1 (direct) and scope 2 (indirect) emissions together with the most material scope 3 (value chain) emissions.

<sup>54</sup>. GHG Protocol and Carbon Trust, 'GHG Protocol - Technical Guidance for Calculating Scope 3 Emissions'.

<sup>55</sup>. DEFRA, BEIS, and UK Government, 'Environmental Reporting Guidelines,' 2019.



## Detailed Guidance.

## GHG Assessment Emission Sources

## Certification

GHG Protocol: Corporate Standard Scope 1 and 2. Value Chain Standard Scope 3	Scope 1				Direct emissions arising from owned, leased or directly controlled stationary sources that use fossil fuels and/or emit fugitive emissions (e.g. natural gas, refrigerants)	
					Direct emissions from owned, leased or directly controlled mobile sources (e.g. leased cars, refrigerants)	
	Scope 2				Emissions from the generation of purchased electricity, heat, steam or cooling	
	Scope 3 upstream	1	Purchased goods & services	1a.	Food supplied to the subject	
				1b.	Water supplied to the subject	
				1c.	Alcohol supplied to the subject	
				1d.	Other goods and consumables (e.g. packaging materials)	
		2	Capital Goods			
		3	Fuel and energy related activities (not included in Scope 1 or Scope 2)	3a.	Upstream emissions of purchased fuels	
				3b.	Upstream emissions of purchased electricity	
				3c.	Transmission and distribution (T&D) losses	
				3d.	All other fuel and energy related activities	
		4	Upstream transportation and distribution	4a.	Outbound courier deliveries of packages	
				4b.	Third-party transportation and storage of production-related goods	
				4c.	Third-party transportation and storage of sold products	
				4d.	All other upstream transportation and distribution	
		5	Waste generated in operations	5a.	Food waste	
				5b.	Wastewater	
				5c.	Other waste	
		6	Business travel	6a.	All transportation by air, public transport, rented/leased vehicle and taxi	
				6b.	Emissions arising from hotel accommodation associated with business travel	
		7	Employee commuting			
		8	Upstream leased assets			
	Scope 3 downstream	9	Downstream transportation and distribution	9a.	Third-party takeaway services	
				9b.	Guest journeys to and from the restaurant	
		10	Processing of sold products			
		11	Use of sold products			
		12	End-of-life treatment of sold products	12a.	Waste from take-aways and home deliveries	
13		Downstream leased assets				
14		Franchises	14a.	Franchise FSPs		
15		Investments				

## Legend



Required



Recommended



Not required

Figure 12. GHG assessment emission sources

## 3

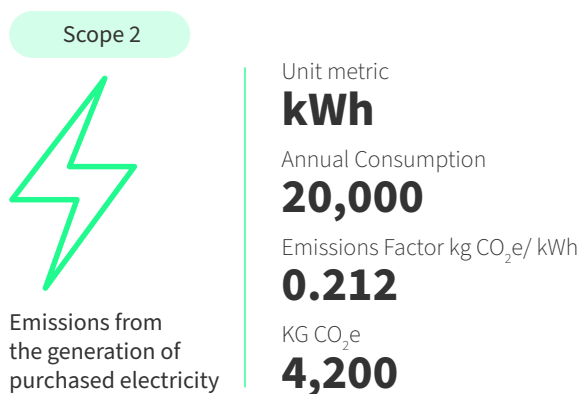
**Detailed Guidance.****Measure**

Restaurants **must** follow the GHG Protocol methodology for calculating emissions<sup>56</sup>. For each emissions source, Restaurants **should** identify the relevant unit metric, the activity or consumption data for the year and the associated unit emissions factors. Unit emissions factors may be specific to the product or service used only if a life cycle analysis has been carried out and data published. Otherwise, industry benchmarks **must** be used and explicitly referenced in the calculations.



Direct measurement of GHG emissions by monitoring concentration and flow rate is not common...the most common approach for calculating GHG emissions is through the application of documented emission factors. These factors are calculated ratios relating GHG emissions to a proxy measure of activity at an emissions source.”<sup>57</sup>

An example of the data required for an electricity consumption figure is shown in Figure 13 below (illustrative data only):



**Figure 13. Sample Data Calculation Form (Electricity Consumption)**

- the unit metric is kWh,
- the consumption is drawn from electricity invoices from the supplier or monitoring of the electricity meter
- the associated emissions factor is drawn from published sources

All GHG emission sources included in the emissions assessment **must** be categorised and published according to the categories defined in Figure 12. Each of the categories defined as required within the Protocol **must** contain information with either the calculated result, a zero result, or a clear reasoning behind its exclusion from the assessment.

‘Spend data’ emissions factors may be used in exceptional circumstances when data is otherwise impossible or impractical to source. Care **should** be taken to ensure that practices are put in place to ensure any spend data (using £ spend only) is limited in its use, as this data may have variable levels of accuracy.

For general guidance on all categories set out in Figure 12, please refer to the GHG Protocol Standard<sup>58</sup>. Additional guidance is provided below for Calculation of Scope 3 emission premises.



56. GHG Protocol, ‘Corporate Value Chain Accounting Report Standard.’

57. World Business Council for Sustainable Development and World Resources Institute, ‘A Corporate Accounting and Reporting Standard (Revised Edition),’ 2004, [https://ghgprotocol.org/sites/default/files/standards/Corporate-Value-Chain-Accounting-Reporting-Standard\\_041613\\_2.pdf](https://ghgprotocol.org/sites/default/files/standards/Corporate-Value-Chain-Accounting-Reporting-Standard_041613_2.pdf).

58. GHG Protocol, ‘Corporate Value Chain Accounting Report Standard.’

## Detailed Guidance.

### || 3.1.1 How to report GHG Emissions from Carbon Neutral and Net Zero Suppliers

Businesses are increasingly considering the option of becoming carbon neutral while offering services to other companies. As an increasing practice, this will have an impact on GHG emissions calculation for businesses that trade with them.

When accounting for these services in the GHG inventory the following steps **must** be followed:

1. Suppliers **must** provide written confirmation that the goods or services provided are net zero or carbon neutral and any relevant third-party certification.
2. Where certification is not provided an inventory for the supplier's GHG emissions and evidence of the purchase and retiring of equivalent approved carbon credits is required.

Where confirmation is provided that a supplier was offering a net zero product or service during the accounting year, the subject organisation may account for goods or services purchased from this supplier as zero emissions.

Care **must** be taken to ensure that these products represent the spirit of the net zero approach, with minimal climate impact. i.e. A product cannot be classified as 'Zero Emissions' if it has not made any real reductions and instead used 100% offsets to cover emissions.

### || 3.1.2 Food, Drink and Consumables

This section details how the Greenhouse gas impact of purchased goods and services, from cradle-to-retail is accounted for in Scope 3 emissions under the Net Zero Restaurants certification.

#### Food & Beverages

Restaurants **must** account for all upstream emissions of all the food and beverage categories defined in Figures 14 and 15, including total food-related emissions from agricultural supply chains under the subcategory 1a "Food and drink supplied to the subject" of Scope 3 emissions.

Restaurants **should** include all purchased food and drink items within their Scope 3 accounting and **must** include 95% by sales.

In accordance with the Quality Data principles (1.6) emissions for each source **should** be calculated with best quality activity data and emissions factors available.

In the absence of item specific emissions factors, Restaurants **should** adopt a pragmatic approach towards achieving a complete GHG assessment of food and drink purchases with best match emissions factors.

When calculating food and beverage impact in terms of GHG emissions, more accurate emission factors **should** be prioritised where available with full source details submitted with validation documents.

Use of peer reviewed studies may be allowed in the context of the Net Zero Restaurants certification and **must** be first submitted to Net Zero Now for approval.

## Detailed Guidance.

### Beverage Emissions Data

The drinks categories identified in Figure 14 represent 30 commonly stocked beverage products in restaurants. This is not an exhaustive list, but may be useful as a guide. Specific calculations **should** be completed for each product stocked by each restaurant. Where additional products are served, and specific emissions factors are not available, the closest reasonable category **should** be used.

GENERAL CATEGORY	SPECIFIC CATEGORY	STANDARD SIZE
Beer and Cider	Draught Beer & Cider (keg)	30L keg
	Draught Ales (cask)	
	Bottled Beers	
	Canned Beers	
	Bottled Ciders	
Wine	Wine - White (Europe)	
	Wine - Red (Europe)	
	Wine - White (ROW)	
	Wine - Red (ROW)	
	Wine - Sparkling & Champagne	
Spirits	Tequila	
	Gin	
	Vodka	
	Rum	
	Whiskey UK	
	Whiskey Import	
	Sherry	
	Port	
	Cognac	
	Brandy	
	Other	
	Bottled FAB	
Mixers	Mixer Bottle (size)	
	Cordial	
	Mixer Can	
Water	Still Water	
	Sparkling Water	
Soft Drinks	Juice	
	Soda 330ml	
	Soda Fountain	

Figure 14. List of required beverage categories

This list is made up of specific beverages used within most Restaurants. For other beverages that are used in cooking, such as milk, non-dairy milks, cream and for dry products like tea and coffee, please refer to the food emissions data set in Figure 15.





3 Detailed Guidance.

Food Emissions Data

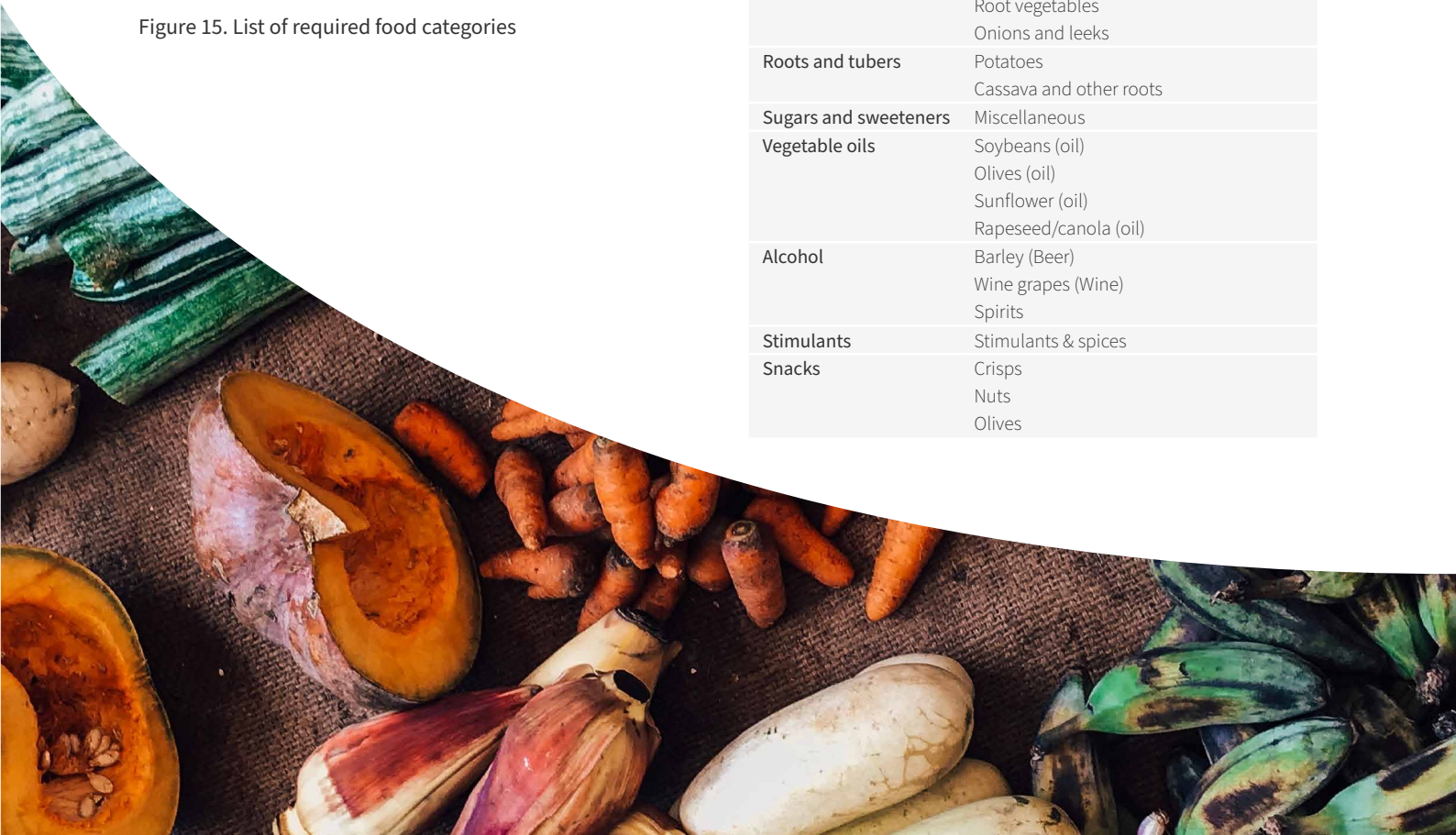
The food types identified in below are commonly used ingredients in food preparation and specific calculations **should** be completed for each item. Where additional products are served, and specific emissions factors are not available, the nearest feasible category **should** be used.

This is not an exhaustive list and may be added to further product lines. Food reporting **should** not be less specific than this list.

ANIMAL-BASED FOODS	
Ruminant Meats	Beef
	Lamb & goat meat
Other meats	Pork
	Poultry (chicken, turkey)
Dairy	Butter
	Cheese
	Ice cream
	Cream
	Milk (cow's milk)
	Yogurt
	Eggs
Fish and seafood	Fish (finfish)
	Crustaceans (shrimp/prawns)
	Molluscs
	Animal fats

Figure 15. List of required food categories

PLANT-BASED FOODS	
Legumes	Miscellaneous
	Beans and pulses (dried)
	Peas
	Peanuts/groundnuts
	Soybeans/tofu
Grains/Cereals	Miscellaneous
	Corn (Maize)
	Oats (Oatmeal)
	Wheat/Rye (Bread, pasta, baked goods)
	Rice
Plant-based milk substitutes	Tree nuts and seeds
	Almond milk
	Oat milk
	Rice milk
	Soy milk
Stimulants	Coffee
	Cocoa
Vegetable oils	Palm oil
Fruits	Miscellaneous
	Apples
	Bananas
	Berries
	Citrus fruit
Vegetables	Miscellaneous
	Cabbages and other brassicas (broccoli)
	Tomatoes
	Root vegetables
	Onions and leeks
Roots and tubers	Potatoes
	Cassava and other roots
Sugars and sweeteners	Miscellaneous
Vegetable oils	Soybeans (oil)
	Olives (oil)
	Sunflower (oil)
	Rapeseed/canola (oil)
Alcohol	Barley (Beer)
	Wine grapes (Wine)
	Spirits
Stimulants	Stimulants & spices
Snacks	Crisps
	Nuts
	Olives



Detailed Guidance.

Restaurants **should** build a complete food and beverage GHG inventory, considering the unit metric, annual consumption, and emissions factor for each item. Figures 16 and 17 below show examples for a beverage and food recording below: (emissions factors for example purposes only):

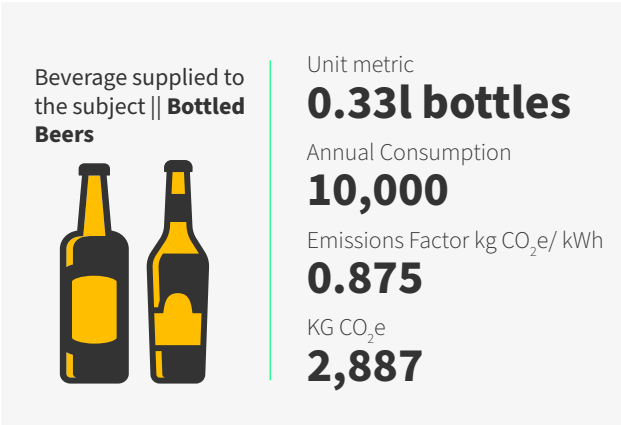


Figure 16. Example Emissions Calculation for Beverages

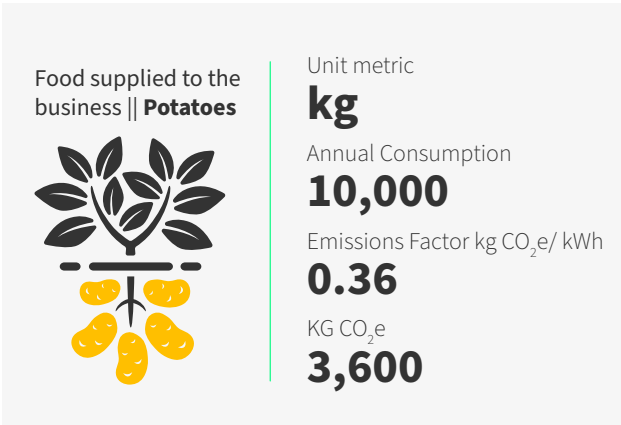


Figure 17. Example Emissions Calculation for Food

Other Purchased goods

Other purchased goods and services, used in the operation of the business, **should** be recorded separately. This includes, but is not limited to:

- Electrical Goods
- Plastics (including single use / disposables)
- Paper / Cardboard (including single use / disposables)
- Glasses
- Chemicals (including cleaning products)
- PPE equipment
- Uniforms

3.1.3 Waste

All waste produced by the restaurants **must** be recorded. Organic waste disposed in landfill produces high levels of GHG emissions and therefore separate figures for organic and non-organic waste **must** be produced.

Food

Restaurants which offer food service **should** provide GHG emissions arising from annualised food waste data based on a completed audit following the Food Loss and Waste Accounting and Reporting Standard

Where a food waste audit has not been completed, restaurants **must** calculate emissions for food waste using industry benchmark data in the formula below:

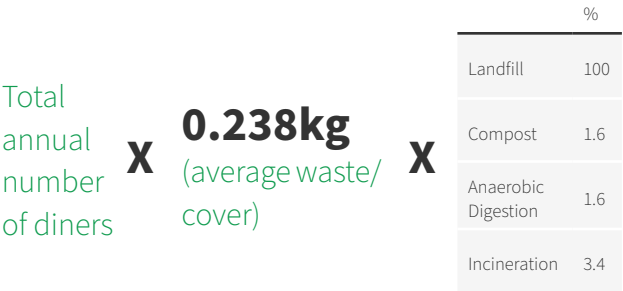


Figure 18. Food Waste Calculations (SRA)

To avoid double counting, restaurants **should** be aware that it may be necessary to deduct this food waste figure from the general waste reported elsewhere, if food waste typically forms part of the general waste.

Non-Organic

Non-organic waste **must** be calculated based on the total weight of waste produced and government emissions factors for the disposal method.



## Detailed Guidance.

### 3.1.4 Water

Businesses **should** calculate the GHG emissions from water supplied through the mains supply network (and returned to the mains drains) using total volume of water supplied and emissions factors per m<sup>3</sup>.

### 3.1.5 Refrigeration

Businesses **should** report leakage from air-conditioning and refrigeration units (including beer fridges). The refrigerant blends **should** be recorded in line with the Kyoto Protocol and Montreal Protocol. These Protocols list gases based on the Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report (AR4) over a 100-year period.<sup>59</sup>

### 3.1.6 Cleaning Products and Chemicals

Businesses **should** list all cleaning products and chemicals used in their operations. This can mirror the layout and structure of UK Government COSHH Assessment forms<sup>60</sup> and use government emissions factors for chemicals.

### 3.1.7 Deliveries

Businesses **must** calculate emissions from delivery vehicles using distance travelled by couriers delivering food and drink products on behalf of the business. This includes third party couriers such as Deliveroo, UberEATS and Just Eat.

$$\begin{array}{|c|} \hline \text{Delivery Method} \\ \hline \text{(CO}_2\text{e/km)} \\ \hline \end{array} \times \begin{array}{|c|} \hline \text{Deliveries Made} \\ \hline \text{(\#)} \\ \hline \end{array} \times \begin{array}{|c|} \hline \text{Average Distance} \\ \hline \text{(km)} \\ \hline \end{array}$$

### 3.1.8 Employee Commuting

Businesses **should** carry out an employee transport survey to quantify the climate impact of employee travel. If a survey is not completed impact **must** be calculated based on an estimation of the total annual number of journeys made for each transport type, together with the average distance travelled per journey.

$$\begin{array}{|c|} \hline \text{Commuting Method} \\ \hline \text{(kg CO}_2\text{e/km)} \\ \hline \end{array} \times \begin{array}{|c|} \hline \text{Journeys Made} \\ \hline \text{(\#)} \\ \hline \end{array} \times \begin{array}{|c|} \hline \text{Average Distance} \\ \hline \text{(km)} \\ \hline \end{array}$$

Similar estimations **should** be made for guest journeys where these are considered to be exclusively for the purpose of travelling to the venue.

59. UK Government, 'Greenhouse Gas Reporting'.

60. 'COSHH Assessment: Identifying Hazard and Assessing Risk,' accessed 26 May 2021, <https://www.hse.gov.uk/coshh/basics/assessment.htm>.

## Detailed Guidance.

### 3.2 Mitigate

#### 3.2.1 Set Targets

Restaurants **must** set and publish targets for emissions reduction that are supported with a base year, timescales, and a clear achievability plan.

Science-based targets (SBTs) are emission targets that are specifically developed in line with climate science and the level of decarbonisation that is required to limit global temperature increase in line with science. The Science Based Targets initiative help companies to set targets aligned with science by providing guidance, effectively helping them transition into a low carbon economy.

Restaurants **must** have or set a reduction target in compliance with the ambition criteria of the SBTi.

The target **must** consist of at least three parts -

- i. an absolute GHG emissions reduction (scope 1 and 2) of at least 25% over five years and;
- ii. at least 15% reduction of our scope 3 emissions within 5 years (excluding food & beverage supply chain emissions) and  
EITHER  
Emissions per meal served of under 2 kg CO<sub>2</sub>e (food & beverage supply chain only) by 2030.  
OR  
at least a 31% emissions reduction per diner within 5 years and absolute food & beverage scope 3 emissions not to exceed those recorded in the base year.
- iii. A Long term target to reduce emissions across all scopes by 90% by 2050, excluding food and beverage supply chain emissions and  
EITHER  
Emissions per meal served of under 1 kg (food & beverage) by 2050.  
OR  
at least a 70% emissions reduction per diner by 2050 and absolute food & beverage scope 3 emissions not to exceed those recorded in the base year.

#### How to choose a base year

Restaurants **should** use the most recent year of data when setting base years for targets<sup>61</sup>.

Recalculations in base year values **must** be undertaken in the event of acquisitions or disposals but not for organic growth.

Details of any base year recalculations **should** be submitted to third party assessors for their consideration, along with a clear reasoning of why a recalculation is necessary, and an explanation of all the considerations taken in the process.

Recalculations of base years **should** be done along with the guidance provided in the GHG Corporate Standard Protocol.

#### Tracking progress to target

Progress towards achieving these targets **must** be reported annually during the process of re-certification. Restaurants that are considerably off track to meet their goals **must** demonstrate that measures are in place to correct it. A business is deemed to be 'considerably off-track' when any of their emission reductions are less than 65% of their target figure(s).

61. GHG Protocol and Carbon Trust, 'GHG Protocol - Technical Guidance for Calculating Scope 3 Emissions'; UK Government, Department for Environment, Food and Rural Affairs, and Department for Business, Energy and Industrial Strategy, 'Environmental Reporting Guidelines: Including Streamlined Energy and Carbon Reporting Requirements', GOV.UK, 2019, <https://www.gov.uk/government/publications/environmental-reporting-guidelines-including-mandatory-greenhouse-gas-emissions-reporting-guidance>.



## Detailed Guidance.

### 3.2.2 Reduce

Restaurants **must** develop Greenhouse gas emissions reduction plans to achieve targets that prioritise pragmatic and cost-effective action around the main sources of emissions.

GHG reduction plans **must** be reviewed at least annually to assess the progress against planned actions, assess the feasibility of further reductions and ensure that the required reduction targets are met. A director or senior manager **should** be responsible for the development and implementation of the emission reduction plan.

Net Zero Now has prepared an advisory document listing the steps that businesses in the hospitality industry can take to reduce their GHG emissions. This document can be found in the online appendices at [netzeronow.org](https://netzeronow.org). The structure of that document is outlined in Figure 19 below. Organisations are advised to check with local authorities and business advisers on grants, incentives and offers to support the adoption of action in each of these areas.

Purchased Goods and Services	<b>Food</b>	<input checked="" type="checkbox"/> Optimise quantity through menu development and portion control <input checked="" type="checkbox"/> Review and modify the sales mix to decrease carbon intensity, adopting strategies from the WRI Playbook
	<b>Drinks</b>	<input checked="" type="checkbox"/> Optimise quantity through pour management and measures and reducing spills <input checked="" type="checkbox"/> Consider impact of product format and packing <input checked="" type="checkbox"/> Review the sales mix to decrease carbon intensity
	<b>Packaging and Consumables</b>	<input checked="" type="checkbox"/> Conduct an assessment to how to Avoid, Replace and Reuse disposables and consumables
	<b>Chemicals</b>	<input checked="" type="checkbox"/> Review the possibilities to switch to lower carbon alternatives
Employee Transport		<input checked="" type="checkbox"/> Encourage active transport with a cycle to work scheme, safe bike storage and lockers <input checked="" type="checkbox"/> Explore the possibility for electric charge points for staff for bikes, scooters and cars
Deliveries		<input checked="" type="checkbox"/> Explore how to reduce delivery frequency with consolidation <input checked="" type="checkbox"/> Explore local delivery through electric vehicle
Electricity (efficiency)	<b>Audit, Analyse, Target, Act</b>	<input checked="" type="checkbox"/> Explore possibilities to understand where and when electricity is used: submeters and half hourly data and set reduction targets
	<b>Equipment - energy efficient specification and benefits of regular maintenance for...</b>	<input checked="" type="checkbox"/> Kitchen <input checked="" type="checkbox"/> Chillers <input checked="" type="checkbox"/> Freezers <input checked="" type="checkbox"/> Ice machines <input checked="" type="checkbox"/> Pumps
	<b>Extract/ Ventilation</b>	<input checked="" type="checkbox"/> Ensure regular maintenance
	<b>Lighting</b>	<input checked="" type="checkbox"/> Review the potential for LED lighting system, prioritising security lights
	<b>Hand driers</b>	<input checked="" type="checkbox"/> Switch to efficient blowers
	<b>Washing/Drying</b>	<input checked="" type="checkbox"/> Reduce water temperature and line dry where possible
	<b>Heat recovery</b>	<input checked="" type="checkbox"/> Explore benefits of heat recovery systems for cellar management

Figure 19. Framework of mitigation guidance for Restaurants

## 3

**Detailed Guidance.**

Electricity (source)	<b>Supplier</b>	☑ Explore switching to a supplier that generates from renewable sources
	<b>On-site</b>	☑ Consider options for onsite solar PV, Solar hot water, wind, geothermal etc.
Water	<b>Audit, Analyse, Target, Act</b>	☑ Understand where water is used and set reduction targets
	<b>Leaks and dripping taps</b>	☑ Address any leaks and dripping taps (5,000 litres / year / dripping tap)
	<b>Flushing pipes</b>	☑ Review best practice
	<b>Defrosting food</b>	☑ Defrost food overnight and not under running water
	<b>Urinals/toilets</b>	☑ Consider waterless urinals and low flush toilets
Cooling/ propellants	<b>Fridges/Freezers</b>	☑ Review gas type and options ☑ Maintenance
	<b>A/C</b>	☑ Review leaks and refrigerant gas type
	<b>Fire Equipment</b>	☑ Maintenance
Heating	<b>Insulation &amp; windows</b>	☑ Carry out a heating assessment to see where efficiency opportunities lie
	<b>Gas boiler efficiency</b>	☑ Review options for increasing efficiency
	<b>Patio heaters/ gas bottles</b>	☑ Ensure timer switch and radiative heating
	<b>Heat pumps</b>	☑ Explore payback for ground source where gardens allow
Delivery	<b>If applicable</b>	☑ Review delivery options with provider or consider own delivery by bike / electric scooter
Delivery waste	<b>Disposables</b>	☑ Explore ordering options to avoid unnecessary cutlery napkins, sachets etc.
	<b>Messaging</b>	☑ Include messaging in delivery to encourage recycling of packaging and responsible disposal of food waste.
	<b>Reusable packaging systems</b>	☑ Explore opportunities to participate in reusable packing initiatives for food delivery
Waste	<b>Audit, Analyse, Target, Act</b>	☑ Assess waste across types and streams: Food waste (prep, spoilage, plate), Beverage waste and packaging waste (glass, metal, card, plastic)
	<b>Identify contractor capabilities</b>	☑ Review with local waste contractors what facilities exist, and support can be provided to segregate and recycle

Figure 19. Framework of mitigation guidance for Restaurants (cont.)

## Detailed Guidance.

### 3.3 Compensate

Once an organisation has calculated and begun reducing emissions in line with science based targets, carbon credits **should** be used to offset residual emissions.

- 1 Carbon Credit = 1 tonne of CO<sub>2</sub>e either removed from the atmosphere or prevented from entering the atmosphere

Carbon credits are generated through projects which remove CO<sub>2</sub> or prevent CO<sub>2</sub> from entering the atmosphere. These projects are made possible by the sale of the credits that they generate as a carbon offset. These credits are generated by implementation of projects that either stop GHGs being emitted (avoidance) or extract and store GHGs from the atmosphere (sequestration).<sup>62</sup>

There are many different types of Carbon Credit and the qualities of those compliant with the protocol requirements are detailed below:

The purchase of offsets **must** be in line with the core Oxford Principles for Net Zero Aligned Carbon Offsetting. These state that: emissions reductions **must** take priority, high quality offset schemes **must** be used, and the composition of offsets **must** be regularly revised and updated to meet the latest scientific guidance<sup>63</sup>.

Businesses that calculate, set targets, and develop action plans in accordance with the criteria can be certified On the Road to Net Zero.

Those that achieve their long term targets and compensate for residual emissions with approved carbon offsets can be certified Net Zero.

#### 3.3.1 Taxonomy of Offsets

The composition of purchased credits **must** be in accordance with the ratios and taxonomy set out by the Oxford Principles, listed in figure 20 below. The five types of offsets, as described by the Oxford Principles, have different long-term impacts with regards to Climate Change Mitigation. Due to the current state of the offset / removal market, and in line with future expected developments, long term carbon removal is currently not available at a large enough scale to make it practical for businesses going Net Zero Now.

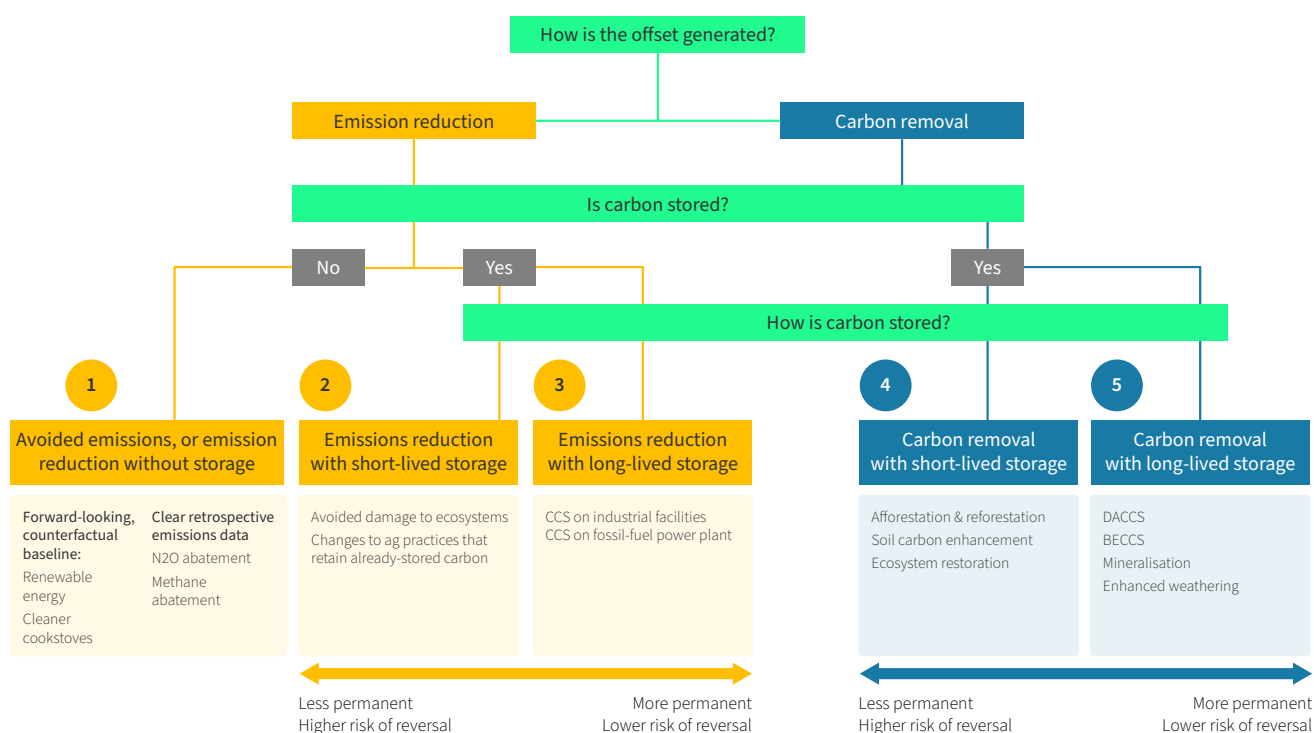


Figure 20. Taxonomy of Carbon Offsets (Oxford University)<sup>64</sup>

62. UNFCCC, 'Race to Zero Campaign.'

63. Myles Allen et al., 'The Oxford Principles for Net Zero Aligned Carbon Offsetting,' 2020

64. Allen et al., 'The Oxford Principles for Net Zero Aligned Carbon Offsetting.'

### 3 Detailed Guidance.

Based on these mitigating circumstances linked to the current carbon offset market, various types of offset may be used in combination. The composition of offsets **must** follow the minimum requirements of the ratios as shown in Figure 21.

Based on this timeline, avoided emissions and short-term emission removal **must** be gradually phased out over the coming years, ensuring that long-term storage of GHG emissions becomes more prevalent and eventually all offsets will be Carbon Removal with Long-Lived Storage.

	2021	2022	2023	2024	2025
<b>1 &amp; 2</b>	55%	53%	50%	47%	45%
<b>3</b>	0%	1%	3%	5%	7%
<b>4</b>	45%	45%	45%	45%	45%
<b>5</b>	0%	1%	2%	3%	3%

Figure 21. From Oxford principles on example net zero aligned offsetting trajectory (Oxford University)<sup>65</sup>

#### The 4 Key Points of the Oxford Offsetting Principles:

1. Cut emissions, use high quality offsets, and regularly revise offsetting strategy as best practice evolves
2. Shift to carbon removal offsetting
3. Shift to long-lived storage
4. Support the development of net zero aligned offsetting

Adhering to the Oxford Principles means that these offsets offer a practical balance between:

- feasible projects that are available now
- projects which are necessary to ensure lasting effective protection for the environment

An example of a current offset bundle that adheres to these principles is available now within the online appendices at [www.netzeronow.org](http://www.netzeronow.org).

#### Purchase of credits

The purchase of approved carbon credits equivalent to the total GHG emissions produced by the business in the assessment year **must** be made in full once the complete carbon footprint is known.



<sup>65</sup> Allen et al., "The Oxford Principles for Net Zero Aligned Carbon Offsetting."



## Detailed Guidance.

### 3.4 Validate

To support the integrity of the Net Zero Restaurants certification, this step defines all required actions to meet the quality assurance and documentation requirements within the Protocol.

Quality assurance must be conducted by the restaurants. The process consists of an evaluation of the processes, data and calculations undertaken, ensuring that all the requirements established in the Protocol have been met.

Documentation must be submitted to the assessor for verification including input data, calculations, assumptions and estimations, procurement evidence and quality assurance attestations.

Figure 22 provides details of the verification requirements and procedures relating to each step in the process. The ability and right to use the Net Zero Restaurants certification mark is dependent on successful validation of the submitted documentation.



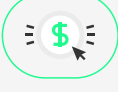


Step	Verification Requirements
<b>1. Calculate</b> 	<p>The definition of the subject and assessment year <b>must</b> be recorded, and full, itemised GHG inventory provided.</p> <p>All calculation tools and emissions factors <b>must</b> be documented and from approved sources.</p> <p>All requirements established in the Protocol <b>must</b> be met.</p> <p><i>The Assessor may require additional information in the event that concerns arise over the quality, completeness, accuracy or robustness of the presented data.</i></p>
<b>2. Mitigate</b> 	<p>The Restaurants <b>must</b> submit evidence of a commitment to a valid reduction target together with an emissions reduction plan to meet the defined targets.</p> <p>The Restaurants <b>must</b> submit a commitment statement signed by a director.</p> <p><i>The Assessor may require additional information in the event that concerns arise over the quality, completeness, accuracy or robustness of the presented data.</i></p>
<b>3. Compensate</b> 	<p>Restaurants applying for Net Zero certification <b>must</b> submit evidence that approved credits equivalent to the total GHG emissions in the assessment year have been purchased and retired.</p>
<b>4. Validate</b> 	<p>The Restaurants <b>must</b> complete and sign a quality assurance attestation and submit together with all the necessary documentation.</p>
<b>5. Communicate</b> 	<p>Use of the Net Zero Restaurants certification mark <b>must</b> adhere to the utilisation of the mark guidelines within the Protocol. All the communications transmitted to customers <b>must</b> be factually based and consistent with the steps followed to achieve the certification.</p>

Figure 22. Verification requirements



## Detailed Guidance.

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### || 3.4.1 Using the Certification Mark

Companies that have successfully completed the Net Zero Restaurants certification, are permitted and encouraged to use the relevant Net Zero Restaurants logo to communicate their actions to customers and other relevant stakeholders.

The logos have been designed to allow companies to give a clear and transparent statement about their achievements and intentions, while helping educate customers in Net Zero businesses. By using the Net Zero Restaurants certification logo, Restaurants can unequivocally demonstrate that they have met the requirements of the Net Zero Protocol, signalling leadership in environmental issues, differentiating from the competition, and meeting the demands from customers for more sustainable options.

#### Requirements

The logo **must** only be used by the certification holder in its own communications and **must not** be used by any subsidiary or restaurant that has not undertaken and successfully passed the certification process.

As part of the quality assurance of the Net Zero Restaurants Protocol, all usage of the Net Zero Restaurants logo **must** be in accordance with the terms of use.

The certification logo **must** not be copied or edited. If this occurs, the certification logo will automatically be invalid.

If the requirements and guidelines provided in the Net Zero Restaurants Protocol regarding the usage of the certification logo are not met, NZR has the right to withdraw its license and request its removal to the affected entity.



## Detailed Guidance.

### 3.5 Communicate

Providing accurate and transparent information about your Net Zero certification is a key element of taking part in the initiative.

The communications made regarding the conformance with the Net Zero Restaurants certification **must** be made in the appropriate form of disclosure, and **must** include an unambiguous identification of the subject, the qualifying date and application period, and access to all evidence supporting the qualifying explanatory statement.

Communicating the certification **should** be done via the use of the Net Zero certification mark. Use of this logo **must** conform to guidelines and all communications **must** be factually based and consistent with the certification achieved.

Rights to using the mark are subject to restaurants receiving Net Zero certification

Restaurants **should** have a high-level understanding of all their major environmental, social, and economic impacts, and ensure that their Net Zero claims are appropriate and presented in relation to these major impacts.

All Restaurants **should** make public a GHG inventory emissions relating to their Net Zero certification. This includes, total gross emissions, a brief description of the emissions sources, justification of any excluded or included sources, reporting period covered any trends evident from the data, targets, and reduction activities.

#### || 3.5.1 Green Claims Code

The UK Competition & Market Authority has released the Green Claims Code as a guidance tool for organisations that are making green claims. All organisations working with the Net Zero Now Protocols **must** follow these rules<sup>66</sup>.

All environmental claims made by businesses in the UK must:

1. Be truthful and accurate: Businesses **must** live up to the claims they make about their products, services, brands, and activities.
2. Be clear and unambiguous: The meaning that a consumer is likely to take from a product's messaging and the credentials of that product **should** match.
3. Not omit or hide vital information: Claims **must not** prevent someone from making an informed choice because of the information they leave out.
4. Only make fair and meaningful comparisons: Any products compared **should** meet the same needs or be intended for the same purpose.
5. Consider the full life cycle of the product: When making claims, businesses **must** consider the total impact of a product or service. Claims can be misleading where they don't reflect the overall impact or where they focus on one aspect of it but not another.
6. Be substantiated: Businesses **should** be able to back up their claims with robust, credible, and up to date evidence.

66. 'Green Claims Code – Get Your Green Claims Right. <https://Greenclaims.Campaign.Gov.Uk/>'

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# Appendices.

Relevant documents will also be updated online at [NetZeroNow.org](https://NetZeroNow.org)

## Appendix A: Use with other standards and methodologies

- The GHG Protocol Corporate Standard (including the separate Guidance on Scope 2 and 3 accounting)<sup>67</sup>,
- The latest UK Environmental Reporting Guidelines<sup>68 69</sup>,
- PAS 2050 - Specification for the assessment of the life cycle greenhouse gas emissions of goods and services<sup>70</sup>
- PAS 2060 – Carbon Neutrality<sup>71</sup>
- ISO 14064 – 1: Greenhouse gases — Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals<sup>72</sup>

### Target Setting

- Science Based Targets Initiative<sup>73</sup>
- World Resources Institute Cool Food Pledge<sup>74</sup>
- UN Race to Zero<sup>75</sup>

### Offsets

- The Oxford Principles for Net Zero Aligned Carbon Offsetting<sup>76</sup>

### Environmental Claims

- The Green Claims Code - UK Competition and Markets Authority<sup>77</sup>

67. GHG Protocol, 'Corporate Value Chain Accounting Report Standard,' GHG Protocol and Carbon Trust, 'GHG Protocol - Technical Guidance for Calculating Scope 3 Emissions'.

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## **PROTOCOL**

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