

# **Methodology Report**

2025 Update



# **Executive Summary**

#### **About Count Your Carbon**

Count Your Carbon is a free carbon footprint calculator designed specifically for schools, colleges, and nurseries across the UK. Developed by **Keep Britain Tidy**, operators of the **Eco-Schools** programme in England, and other expert organisations (more information on the development team can be found in section 8.1), the tool helps education settings measure their greenhouse gas emissions, understand their main impact areas, and identify opportunities to reduce their footprint.

It is simple, accessible, and aligned with international standards such as the **Greenhouse Gas Protocol**, while tailored to the practical realities of school life.

## **Purpose of this Report**

This **Methodology Report** explains how the calculator works, what data sources and assumptions underpin it, and how results should be interpreted. It is designed to give educational settings, sustainability leads, and wider stakeholders confidence in the robustness of the tool.

## **Key Methodology Updates in Version 1.2 (2025/26)**

A core principle of the *Count Your Carbon* calculator is **transparency**. In line with the **GHG Protocol**, all updates that affect reported emissions are clearly documented, and consistently communicated. Where possible, historical results are recalculated so that year-on-year comparisons remain valid. This ensures schools can interpret results with confidence and make fair comparisons over time.

For 2025/26, the following updates have been introduced:

## **Major Changes**

- **Uniform emissions** No longer included in the total footprint; now reported separately as contextual information. This change has also been applied retroactively to all previous assessments.
- **Battery and hybrid vehicles** New options have been added for reporting electric and hybrid vehicles, improving accuracy in transport emissions.



- **Staff and student commuting** Methodology has been updated to collect *average* commuting distances for students (instead of furthest distance) and to record staff commuting separately.
- **Removal of composting questions** Questions on food and garden composting have been removed due to confusion and negligible impact on results. Schools are still encouraged to compost, but it is no longer part of the carbon footprint report.

## **Minor Adjustments**

- **Emission factors** All activity-based factors (energy, transport, waste, water) have been refreshed using 2025 UK Government GHG Conversion Factors. Spend-based categories updated using EEIO factors adjusted for inflation.
- **Benchmarking** Updated using the most recent year of school submissions; outliers removed, and fewer "I don't know" options available.
- **Simplification of question sets** Minor rewording applied to reduce ambiguity and improve data consistency.
- **Future-proofing** New back-end fields added to support potential future updates (e.g. cold meals, drinks, detailed waste segregation).

## **Looking Ahead**

These updates reflect ongoing feedback from schools, partners, and advisors, ensuring that *Count Your Carbon* remains both practical and technically robust. More detail on the methodology updates is provided in Section 7, while common user queries are addressed in Appendix A.

Schools are **encouraged to consult the methodology report each year when comparing results.** Any material updates are highlighted so that differences in reported totals can be understood in context. This transparent approach reduces confusion, strengthens trust in the tool, and aligns with best practice in carbon accounting.



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## 1. Introduction

## 1.1. Purpose of the Report

The purpose of this methodology report is to explain how the *Count Your Carbon* calculator has been designed and how it works. It aims to:

- Improve confidence in the calculations.
- Explain why each piece of data is requested.
- Justify why the chosen calculation approach has been taken over other possible methods.
- Reduce repeated queries by addressing common questions directly.

By providing a transparent overview of the methods and data sources, the report allows educational settings and stakeholders to understand the reasoning behind the tool and to trust the results it produces.

## 1.2. Intended Audience

This report has been written for a wide audience, including:

- **School staff** who want to understand how their results are generated and how to use them for learning and action planning.
- **Sustainability leads** who may be looking for more technical information to guide decision-making.
- Policy makers and funders who need assurance that the methodology is credible, robust, and aligned with national guidance.
- **Technical reviewers and carbon specialists** who may wish to examine the methods and data sources in more detail.



#### 1.3. What's New in Version 1.2

The 2025/26 release of **Count Your Carbon** (Version 1.2) introduces several updates designed to improve accuracy, usability, and transparency.

#### Major methodology changes include:

- Uniform emissions Uniform emissions are no longer included in the school's total footprint. These emissions are now reported separately, with new questions capturing the impacts of second-hand and re-worn uniform.
- **Transport** Schools can now report electric and hybrid vehicles, and commuting questions have been refined to use *average* distances and collect separate data for staff.
- **Waste** On-site composting questions have been removed to avoid confusion and because the impact on results is negligible.
- **Emission factors** All categories have been updated with the 2025 UK Government GHG Conversion Factors, with procurement values refreshed using updated Environmentally Extended Input-Output (EEIO) data.

#### Other refinements and improvements include:

- A new review function, allowing schools to check their responses before finalising.
- Replacement of EPC with DEC ratings.
- Updates to benchmark datasets, based on over 2,500 reports.
- A redesigned carbon footprint report in the dashboard, including both pie chart and data table views.
- Updated data gathering tools, now provided as a digital spreadsheet rather than a static PDF.

Full details of both major and minor changes are provided in the **Executive Summary** and in **Section 7 (Comparability Over Time).** 



## 1.4. Scope of the Calculator

The *Count Your Carbon* calculator is designed specifically for nurseries, schools, and colleges in the UK. **It does not include universities**. The tool covers the major operational activities (discussed further in section 3.5.2) that fall within a school's greenhouse gas (GHG) reporting boundary, aligned with the **GHG Protocol** (WRI and WBCSD, 2025).

Table 1-1. CYC reporting categories, activities, and GHG Protocol coverage.

CYC Reporting Category	Included operational activities	GHG Protocol Emissions Categories Covered
Energy, Waste, and Water	<ul> <li>Electricity</li> <li>Gas</li> <li>Other fuels</li> <li>On-site renewable energy</li> <li>Waste generated on site</li> <li>Water use &amp; disposal</li> </ul>	Scope 1 Scope 2 Scope 3.3 Scope 3.5
Transport	<ul><li>School vehicles</li><li>Staff commuting</li><li>Pupil travel</li><li>School trips</li></ul>	Scope 1 Scope 3.3 Scope 3.6 Scope 3.7
Food <sup>1</sup>	School-provided hot meals	Scope 3.1

<sup>&</sup>lt;sup>1</sup> Cold meals and packed lunches are excluded from the current version (1.2) of Count Your Carbon. This is something that is being considered for future versions.



Purchasing	<ul> <li>Cleaning supplies &amp; PPE</li> <li>Computer &amp; electronic products</li> <li>Furniture</li> <li>Machinery &amp; equipment</li> <li>Textiles</li> <li>Other manufactured goods</li> <li>Building services</li> <li>IT services</li> <li>Security services</li> <li>Other professional services</li> </ul>	Scope 3.1 Scope 3.2
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#### 1.4.1. Exclusions and Contextual Questions

While the *Count Your Carbon* calculator covers the main operational activities under a school's control, some sources are either reported separately or excluded from the total footprint. These exclusions are consistent with the **GHG Protocol** and are explained in more detail in Section 7.2 (Key Changes Affecting Comparisons) and Section **Error! Reference source not found.** (**Error! Reference source not found.**).

- **Uniform** Emissions are reported separately as important information but excluded from the total footprint, in line with GHG Protocol boundaries.
- **Cold meals and drinks** Currently excluded; planned for potential inclusion in future versions.
- **Packed lunches** Considered household emissions, not under the school's operational control.
- On-site renewable generation Submitted as part of the calculation for context, but does not reduce grid-purchased electricity totals (to avoid double counting).<sup>2</sup>

<sup>&</sup>lt;sup>2</sup> In line with the GHG Protocol, avoided emissions from grid displacement are not included in the school's total.



- Avoided emissions Benefits from recycling or energy recovery are excluded, as these are attributed to the next user of recovered materials, not the school.<sup>3</sup>
- **Embodied emissions of infrastructure** Emissions from building construction, renewable installations, or large-scale capital projects are not currently included.

<sup>&</sup>lt;sup>3</sup> In line with the GHG Protocol, emissions from waste treatment are included up to the point of disposal. Avoided emissions are attributed to the next user of recovered materials or energy.



## 2. Overview of the Calculator

## 2.1. Background and Development History

Count Your Carbon was developed in response to the Department for Education's Sustainability and Climate Change Strategy, which requires all schools to appoint a dedicated Sustainability Lead and publish a Climate Action Plan by 2025.

The tool was co-designed with extensive input from staff across UK local authorities, schools, and multi-academy trusts - including teachers, headteachers, catering staff, bursars and caretakers, and sustainability leads. Stakeholder engagement ensured that the questions asked, and the design of the tool, were practical, relevant, and accessible for schools.

#### **Development timeline:**

#### 2023

- Jan: Project team assembled, development begins
- **January June:** Research with schools and nurseries to establish calculator scope, gather benchmarking data, establish what data they can gather and set the initial methodology.
- March September: Digital build
- Sept: Pilot testing and early stakeholder engagement

#### 2024

- **Feb:** Count Your Carbon launched.
- **Apr:** Funding awarded by *Let's Go Zero* to support development of the *The Playground* resource.
- **June:** First updates released in response to user feedback, including refinements to the question set and reporting outputs.
- **Nov:** Surpassed 1,000 school sign-ups and 500 completed carbon footprint reports.

#### 2025

 Mar: Surpassed 2,000 school sign-ups and 1,300 completed carbon footprint reports.



- **Apr:** *The Playground* resource launched. New visual identity introduced, alongside major user experience improvements including a redesigned dashboard.
- **Aug:** Closed the academic year with 3,300 school sign-ups and 2,400 completed footprint reports.
- **Sept:** Count Your Carbon Version 1.2 launched, introducing significant methodological and reporting updates (see Section 1.3 and Section 7).
- Nov: Planned release of the first Count Your Carbon statistics report.
- Nov: Planned release of the School Group Dashboard.

#### 2026

• **Sept:** Planned release of *Count Your Carbon* Version 2.

## 2.2. User Journey

## 2.2.1. Creating a User Account

 Anyone who wants to use Count Your Carbon must first create a user account by visiting <a href="https://calculator.countyourcarbon.org/register">https://calculator.countyourcarbon.org/register</a>, entering their details, and verifying their account via a link emailed to them.

## 2.2.2. Registering a School

- Once verified, users are invited to register a school.
- To register a school, the user must provide key information including school name and address, school type, local authority, and whether the school is part of a multi-academy trust. Once this information is confirmed, the school is registered, and a calculation can be started.
- A single user can register multiple schools. To register additional schools, users should click on the **'Register additional schools here'** link from either the schools list or the school dashboard.
- If registered to multiple schools, users are presented with the option to select a school upon logging in. They can also switch between schools using a drop-down menu on the school dashboard.



## 2.2.3. Managing Users

- Additional users can be added to any school via the 'Manage users' page, accessible from the school dashboard. There are three user roles available:
  - **Reviewer** Can view existing results and download reports but cannot generate new ones.
  - **Contributor** Can generate new reports and update a subset of the school's details.
  - **Administrator** Can generate new reports, update the school's details and manage user access by adding or removing other users.

## 2.2.4. Completing a Calculation

- Before starting a calculation, users are advised to follow the data gathering guidance and use the 'Data Collection Sheet' to collect the required data. This can be found at: <a href="https://www.countyourcarbon.org/gathering-your-data/">https://www.countyourcarbon.org/gathering-your-data/</a>
- To begin a calculation, the user should click on **'Start calculation'** from the school dashboard.
- They will then be required to confirm some key information about the school they are completing the calculation for, such as number of staff and students, number of weeks open per year, and number of days open per week.
- Following this, the user is taken through a linear sequence of up to 42 questions, covering the following categories:
  - Fuel
  - Electricity
  - Water
  - Waste
  - School vehicles
  - School trips
  - Staff and student commuting
  - Food
  - Purchasing
  - Uniform



- Users should input as much data as possible. Where information is unavailable, they have the option to **'select the average'**, which uses benchmark data to generate a partially estimated footprint report.
- Once all questions are completed, users are invited to review their answers before clicking **'Complete'**.

## 2.2.5. Carbon Footprint Report

- Once the calculation is complete the user is directed to the report dashboard, which provides:
  - A total carbon footprint figure in tCO<sub>2</sub>e
  - Emissions broken down across the eleven areas in tCO<sub>2</sub>e
  - Emissions broken down by percentage of the total footprint
  - Scope labels against each of the emissions categories
  - A stacked bar chart indicating carbon footprint over time

#### 2.3. Intended Outcomes

Count Your Carbon was created in response to the urgent climate challenges we face, with a clear mission: to help educational settings reduce their carbon emissions by 50% by 2030.

Aligned with the **Department for Education's Sustainability and Climate Change Strategy** (UK Gov, DfE, 2023) - which calls for all schools to appoint a dedicated Sustainability Lead and to have a *Climate Action Plan* by 2025 - *Count Your Carbon* offers tools and guidance to help educational settings meet these expectations and drive meaningful change across the sector.

## 2.3.1. Support with climate action planning

By 2025, DfE is expecting all schools to have a Climate Action Plan and a Sustainability Lead (UK Gov, DfE, 2023). The areas of focus for climate action plans, as outlined by the DfE are Adaptation and Resilience, Biodiversity, Climate Education and Green Careers, and Decarbonisation. With the tools and guidance provided through *Count Your Carbon*, educational settings are **supported to generate the decarbonisation section of their climate action plans**. Schools can measure their carbon footprint, create a tailored decarbonisation plan, and track their progress as they implement carbon-cutting actions. As schools return to



measure their footprint each year, we hope they will begin to see a significant reduction in their carbon emissions and move closer to net zero.

## 2.3.2. Carbon literacy and climate education

Through *Count Your Carbon* and our classroom tool, *The Playground*, we're **fostering carbon literacy and inspiring climate action amongst staff and students in educational settings across the UK**. With the Department for Education's Sustainability and Climate Change strategy setting out decarbonisation targets for schools in England, and many local authorities and multi-academy trusts declaring climate emergencies, it's clear that collective action is essential. Individual schools can make a big impact - but when many schools act together, the results are transformative.

## 2.3.3. Driving sector-wide climate action

We're **building the most comprehensive dataset on carbon emissions in the UK education sector.** With more settings using the platform, we hope that very quickly our data will show areas that need to be addressed at scale and drive sector-wide climate action. This will paint a powerful picture for policy makers, the Department for Education, local authorities, and education leaders. We will use all our relationships and influence to bring about the biggest change possible, supporting the sector to maximise its carbon reduction potential.



## 3. Methodology Principles

The *Count Your Carbon* calculator has been designed to balance technical accuracy with ease of use in a school setting. The following principles guide how the methodology has been developed and how future updates will be made:

- Transparency
- Balancing Simplicity and Accuracy
- Minimising Data Burden
- Alignment with Standards

## 3.1. Transparency

Transparency is central to building confidence in the tool. The methodology report explains how each calculation is made, what data sources are used, and what assumptions are applied. Where estimates are required, these are clearly described, and the rationale for each approach is provided. Schools and stakeholders can therefore understand not only the results of the calculator, but also the reasoning behind them.

## 3.2. Balancing Simplicity and Accuracy

Carbon accounting can be highly technical and sometimes overly complex. However, the *Count Your Carbon* calculator is designed for educational settings, many of which have limited time and resources to collect detailed data. The methodology therefore prioritises approaches that are **accurate enough to give meaningful results**, but simple enough to keep the tool usable by non-specialists.

This balance means that, in some areas, **average or spend-based emissions factors** are used instead of more complex activity data, and **benchmarks** are available where schools cannot provide primary data. While this may reduce precision, it ensures that schools can complete their footprint without facing an **unrealistic data burden**.

Following completion of a calculation, no matter how much data a school can provide, resources are supplied to support settings to generate a decarbonisation plan.



## 3.3. Minimising Data Burden

The calculator has been built with teachers and school staff in mind. Every question has been carefully considered to ensure it is:

- Relevant to the school's operational activities.
- Accessible using information typically available from bills, records, or simple estimates.
- Proportionate to the accuracy and/or material value gained from the response.

Where possible, questions have been simplified, combined, or replaced with benchmarks so that schools can complete the tool in a reasonable time without specialist support. This also makes the tool more inclusive, enabling all schools to participate regardless of resources.

## 3.4. Alignment with Standards

The methodology is aligned with the **Greenhouse Gas Protocol** (WRI and WBCSD, 2025), the most widely used international framework for greenhouse gas accounting. Scope 1, Scope 2, and Scope 3 categories are defined in accordance with the protocol. **UK Government GHG Conversion Factors** (UK Gov, DESNZ, 2025) are used wherever possible, with supplementary datasets (e.g. IEA, Ecoinvent, EXIOBASE) applied where national factors are unavailable.

The approach also aligns with wider UK school sustainability initiatives, ensuring that results can be understood in the context of **Department for Education's** (DfE) sustainability and climate change guidance (UK Gov, DfE, 2023) and initiatives such as **Eco-Schools** (Keep Britain Tidy) and **Let's Go Zero** (Ashden).

## 3.5. Methodology Reporting Boundaries

The **GHG Protocol** requires organisations to define clear reporting boundaries so that it is transparent which emissions are included, and which are excluded, in a footprint calculation. These boundaries are set in two ways:

• **Organisational boundaries** - defining the organisational unit (e.g. individual school, trust, local authority) for which the footprint is being reported.



• **Operational boundaries** - defining which emission sources and scopes (1, 2, and 3) are included.

The Count Your Carbon calculator applies these principles as follows.

## 3.5.1. Organisational Boundaries

#### **GHG Protocol definition:**

Organisational boundaries determine which entities, sites, or operations are included in the footprint. This is usually based on ownership or control (financial or operational).

(WRI et al., 2004)

#### **Application to Educational Settings in the UK:**

The *Count Your Carbon* calculator is built for nurseries, schools, and colleges in the UK. It does **not** include universities. At present, the calculator captures emissions at the individual school level.

In practice, most educational settings and schools in the UK are owned, controlled, or funded by larger entities such as:

- Multi-Academy Trusts (MATs)
- Local authorities
- Government
- Faith schools
- Private schools

While reporting remains school-level for the 2025/26 academic year, future updates will expand functionality to allow reporting at group/parent entity level (e.g. for MATs or local authorities). In November 2025 we will launch a School Group Dashboard which will allow representatives from Local Authorities, Multi-Academy Trusts, and other school groupings to access aggregated data. This will support consistency across governance structures, while ensuring comparability between individual schools is maintained.



## 3.5.2. Operational Boundaries

#### **GHG Protocol definition:**

Operational boundaries define the direct and indirect activities that generate greenhouse gas emissions, categorised into:

- **Scope 1:** Direct emissions from owned or controlled sources (e.g. gas use, school vehicles).
- **Scope 2:** Indirect emissions from purchased energy (e.g. electricity).
- **Scope 3:** Other indirect emissions in the value chain (e.g. commuting, procurement, waste).

(WRI et al., 2004)

#### **Application to Educational Settings in the UK:**

The calculator includes all relevant sources across Scopes 1, 2, and 3 that a school can reasonably report on. The table below outlines how the Greenhouse Gas Protocol (GHGP) boundaries apply to the *Count Your Carbon* categories:

**Table 3-1. Alignment of CYC categories with GHG Protocol scopes** 

GHGP Scope	Related GHGP Subcategory	CYC Categories	
Scope 1	Category also covers <b>Scope 3 Cat 3</b> - Fuel & Energy Related Activities	<ul> <li>Building fuel use (e.g. gas, heating oil)</li> <li>Fuel use from schoolowned/controlled vehicles</li> </ul>	
Scope 2	Category also covers <b>Scope 3 Cat 3</b> - Fuel & Energy Related Activities	Purchased grid electricity	
	Cat 1 - Purchased Goods & Services Cat 2 - Capital Goods	<ul><li>Food and drink</li><li>Purchases</li></ul>	
Scope 3	Cat 5 - Waste Generated in Operations	<ul><li>Waste</li><li>Water (including supply &amp; wastewater treatment)</li></ul>	
	Cat 6 - Business Travel	School trips	



	Cat 7 - Employee Commuting	Staff and Student commuting
Out of Scope	n/a	• Uniform <sup>4</sup>

<sup>&</sup>lt;sup>4</sup> Uniform emissions are excluded from the school's operational footprint because, under the GHG Protocol, they fall outside the defined organisational and operational boundaries. Uniform purchases are made by households, not the school itself, and are therefore not attributable to the school's direct or indirect operations. For further detail, see Section 7.2.1 Treatment of Uniform Emissions



# 4. Emissions Categories and Calculation Methods

## 4.1. Energy, Waste, and Water

Accurate reporting in this category is particularly important because these activities fall directly under a school's **operational control**<sup>5</sup>.

**Electricity and fuel use (including gas)** are classified as **Scope 1 and Scope 2 emissions** under the *Greenhouse Gas Protocol* (WRI *et al.*, 2004). These represent the most significant and directly measurable sources of a school's carbon footprint, making them the <u>highest priority</u> for accurate data collection.

**Waste and water** are categorised as **Scope 3 emissions**. Whilst these emissions are likely to be low, from a wider environmental perspective, they are essential metrics for understanding sustainability performance and are highly relevant for engaging pupils in environmental education.

Unlike the other emission categories, energy, waste, and water are all areas where mitigation actions are tangible and easy to conceptualise, from reducing energy consumption to cutting down food waste and conserving water.

## 4.1.1. Category Inclusions: Energy, Waste, and Water

This category covers emissions from energy use in school buildings (electricity, gas, and any on-site fuel use), waste generation (general waste, recycling, food, and garden waste), and water supply and treatment. These are typically the most consistent and well-understood sources of emissions for schools and are directly under the school's operational control.

<sup>&</sup>lt;sup>5</sup> Refer to section 3.5 Methodology Reporting Boundaries for more information on accounting boundaries defined for *Count Your Carbon*.



# 4.1.2. Table 4-1. Methods Used - Energy, Waste, and Water

Emissions Source	Chosen Method	Rationale for chosen method	Alternative Methods Considered
Fuel Use	<b>Fuel-based</b> quantity of fuel consumed  x emission factor	<ul> <li>Direct, accurate measure of consumption</li> <li>Data widely available from utility bills</li> </ul>	<ul><li>Supplier-specific calorific values</li><li>Site-level monitoring</li></ul>
Purchased Electricity	Hybrid Scope 2 (location- and market-based)  consumption x emission factor  (market-based factor = 0 if 100 % renewable tariff reported)	<ul> <li>Reflects actual procurement choices while maintaining comparability across all schools.</li> <li>Aligns with GHG Protocol Scope 2 Guidance.</li> <li>Uses grid-average factors unless a certified renewable tariff is confirmed.</li> </ul>	<ul> <li>Dual reporting (planned for future version).</li> <li>Supplier-specific emission factors.</li> <li>Half-hourly meter data.</li> </ul>
On-site Renewable Electricity Generation	Activity-based  \[ \sum_{electricity generated} \]	<ul><li>Aligns with GHG Protocol</li><li>Prevents double counting</li></ul>	Avoided emissions     accounting

Waste (general/ recycling/ garden/ food)	Waste-type specific  waste produced <sup>6</sup> x  waste type and waste treatment specific emission factor	<ul> <li>Captures disposal-related impacts across treatment routes</li> <li>Composting questions removed due to data inconsistency and negligible impact.</li> <li>Aligns with GHG Protocol</li> </ul>	<ul> <li>Supplier-specific method</li> <li>Material-specific waste segregation</li> </ul>
Water Use	Activity-based consumption $(m^3) x$ water supply & treament emission factors	<ul> <li>Straightforward to collect from bills</li> <li>Uses national factors consistent with UK Government datasets.</li> </ul>	Local area-specific water treatment data

<sup>&</sup>lt;sup>6</sup> Waste produced is based on volume estimates from bin sizes which is converted into average mass (in tonnes) for each bin type and size.



## 4.1.3. Key Assumptions - Energy, Waste, and Water

- **Fuel**: No major assumptions; fuel use is reported directly in kWh or litres. Conversion uses UK Government conversion factors.
- **Electricity**: The *Count Your Carbon* calculator currently applies a **hybrid Scope 2 approach**, combining elements of both *location-based* and *market-based* methodologies in line with the GHG Protocol.
  - Default (location-based): Where a school reports electricity purchased on a standard tariff, or selects "No" to the renewable tariff question, the calculator applies the UK grid average emissions factor, representing the carbon intensity of the national grid.
  - Renewable tariff (market-based): If a school confirms that 100 % of its purchased electricity is from a certified renewable or "green" tariff, the calculator applies a market-based factor of zero emissions, assuming verification through Renewable Energy Guarantees of Origin (REGOs) or equivalent certification.
  - o Future versions of the calculator will introduce dual reporting, showing both location-based and market-based results. This will give schools a clearer view of their emissions and improve alignment with reporting frameworks such as SECR and the GHG Protocol Scope 2 Guidance.

#### • On-site renewable generation:

 On-site solar, wind, or other renewable generation is recorded separately as contextual information. The associated emissions reduction is not deducted from grid-purchased electricity totals to prevent double-counting.

#### Waste:

- o Bin volumes are converted into estimated weights using Biffa's published bin specifications.
- Assumed bin fill levels: general and food waste bins = 75% of maximum; recycling bins = 50% of maximum.
- Collections are assumed to occur consistently for 52 weeks per year
   (e.g. "twice per week" = 104 collections annually).
- 100% of general waste is assumed to be disposed of via incineration with energy recovery.



- 100% of "recycling" is assumed to be disposed of via open-loop recycling.
- o Garden and food waste is assumed to be disposed of via industrial composting or anaerobic digestion (UK Gov emissions factors are the same for both disposal methods).
- Composting questions have been removed in Version 1.2 due to confusion and negligible impact. Schools are encouraged to compost as good environmental practice, but this is no longer included in the carbon footprint.
- Waste emissions factors include both transport to treatment facilities and the disposal process itself.
- Water: No additional assumptions beyond national emission factors.

## 4.1.4. Limitations - Energy, Waste, and Water

**Fuel:** Data quality depends on the accuracy of school meter readings or supplier billing. Errors in billing periods or unit conversions may introduce inaccuracies.

#### **Electricity:**

- While renewable tariffs are currently treated as zero emissions under the market-based method, dual reporting (market-based and location-based) is not yet live. As a result, schools cannot directly compare both approaches in Version 1.2.
- The calculator does not account for embodied emissions associated with installing or maintaining renewable generation systems.

#### Waste:

- Recycling streams are consolidated, meaning material-specific differences (e.g. paper vs plastics vs metals) are not captured.
- Composting has been removed from Version 1.2 due to confusion and negligible impact. Schools that compost still reduce environmental impact, but this is not reflected in the footprint.
- Assumed bin weights (50-75% of maximum) may not accurately reflect every school's actual waste generation, particularly in schools with irregular collection patterns or seasonal variations.
- Emissions from food waste diverted to anaerobic digestion are not explicitly reported in the current version.



**Water:** Local variations in water supply and treatment emissions are not captured, as UK Government factors are national averages. Schools in regions with higher or lower treatment intensities may therefore see results that do not fully reflect their local conditions.

## 4.1.5. Relevant FAQs - Energy, Waste, and Water

#### Q.a: "Why aren't recycling bins segmented by material?"

At present, recycling is consolidated into a single category. This is because not all schools can separate waste streams, and many waste providers sort materials after collection. Including material-specific options would increase reporting complexity and create inconsistent data. This may be introduced in future versions when reliable factors and data collection practices are available.

#### Q.b: "Is the transport of waste included in the footprint?"

Yes. For general waste, emissions factors cover the full lifecycle from collection and transport through to disposal ("gate to grave"). For recycling, factors include transport to an energy recovery or materials reclamation facility only, in line with GHG Protocol guidance.

#### Q.c: "Why do my energy emissions not decrease if we install solar panels?"

On-site renewable electricity generation is reported separately as contextual information. The emissions from purchased grid electricity are still based on your billed consumption. This avoids double counting and ensures results are consistent with GHG Protocol guidance.

#### Q.d: "What happens if we buy 100% renewable electricity?"

If your school purchases 100% renewable electricity through a recognised green tariff, your emissions from purchased electricity are reported as zero in the calculator under the market-based method<sup>7</sup>. However, figures may differ if you compare them to the location-based method (UK grid average), which reflects actual grid supply. Future versions of the calculator will report both market-based and location-based results side by side, in line with GHG Protocol best practice.

Q.e: "What if we don't know our exact energy, waste, or water use?"

<sup>&</sup>lt;sup>7</sup> Refer to section 9.2 for more information on Location Vs Market-based reporting for electricity.



Where primary data is missing, the calculator uses benchmarks based on averages for your school type. These benchmarks provide a reasonable estimate, but schools are encouraged to input actual data wherever possible, as this improves accuracy.

#### Q.f: Should wastewater/sewerage charges be included in water usage?

Yes. Report the total charges on your bill, covering both supply and treatment, as the factors account for both services.



## 4.2. Transport

Transport-related emissions cover all school-operated vehicles, school trips, and commuting by staff and students. These are key Scope 3 categories, representing significant but highly variable sources of emissions depending on location, transport provision, and school policies.

Accurate data collection in this category is important because it provides insight into both direct transport operations (such as school minibuses) and indirect impacts (such as daily travel by students and staff). From an educational perspective, transport is a highly visible aspect of sustainability that schools can use to engage pupils in behaviour change, such as promoting active travel or public transport.

## 4.2.1. Category Inclusions: <u>Transport</u>

This category captures three major sub-sections:

- **School Vehicles** emissions from fuel consumption, mileage, and spend on vehicles directly operated by schools.
- **School Trips** emissions from organised trips, both domestic and international.
- **Commuting (Staff and Students)** emissions from daily travel to and from school, disaggregated by mode of transport.



# 4.2.2. Table 4-2. Methods Used - <u>Transport</u>

Emissions Source	Chosen Method	Rationale for chosen method	Alternative Methods Considered
School Vehicles	Distance-based where mileage is reported  \[ \sum_{Avg distance travelled by vehicle type x emission factor or \]  Spend-based if only fuel spend is reported	<ul> <li>Prioritises average reported mileage for accuracy</li> <li>Spend data provides a fallback method</li> <li>Average assumptions ensure no school is excluded</li> </ul>	Telematics-based mileage reporting
School Trips	Distance-based  Trip Emissions = distance $x$ number of passengers $x$ emission factor by mode $\sum International \ trips + Domestic \ trips$	<ul> <li>Provides emissions linked to actual trip activity</li> <li>Factors applied per passenger</li> </ul>	
Student Commuting	Average/Distance-based  Split of transport type x  average travel distance	<ul> <li>Based on direct school- provided data</li> <li>Scalable across pupil population</li> </ul>	Per pupil survey asking distance travelled and transport type
Staff Commuting	Average/Distance-based  Split of transport type x  average travel distance	<ul> <li>Based on direct school- provided data</li> <li>More accurate than student- distance multiplier used in earlier versions</li> </ul>	<ul> <li>Household travel surveys</li> <li>HR payroll-linked commuting surveys</li> </ul>

## 4.2.3. Key Assumptions - Transport

#### **School vehicles:**

- Emissions are calculated using fuel consumption (litres or kWh) where possible, or distance travelled multiplied by an appropriate vehicle factor.
- All journeys are assumed to be round-trips starting and ending at the school.
- Vehicle occupancy is not factored in; emissions are allocated in full to the school.

## Staff and student commuting:

- Staff commuting distance is now collected separately; previously it was estimated as twice the student commuting distance.
- Student and staff commuting are based on average one-way distances, multiplied by the number of journeys per week and weeks per year.
- Journeys are assumed to be single occupancy (e.g. one student per car, one staff member per car). Car sharing is not yet accounted for.
- Where commuting data is missing, benchmarks are applied based on averages for school type and location.

## **School trips:**

- Distances are reported as round trips, multiplied by the number of students travelling.
- Mode of travel (coach, minibus, rail, air) is selected by the school and matched to the relevant emissions factor.
- Average occupancy rates are assumed based on national datasets.

#### **Electric and hybrid vehicles:**

- New options have been added for battery-electric and plug-in hybrid vehicles.
- EVs charged at the school are assumed to draw electricity from the grid, using location-based emissions factors. Avoided emissions from renewable generation are not counted.
- Hybrids are assumed to operate in blended mode, using published average emissions factors.



## 4.2.4. Limitations - Transport

- **Data availability:** Schools may not have accurate commuting data, particularly for students. Reliance on benchmarks in these cases may reduce precision.
- **Car sharing:** The calculator does not currently account for shared journeys (e.g. siblings travelling together or staff car-pooling), which may lead to an overestimate of commuting emissions.
- Average distances: Using average rather than precise journey distances simplifies data entry but may not capture variation across the school population.
- **Electric vehicles:** EV emissions depend heavily on charging behaviour (home vs. school, grid vs. renewables). These differences are not currently captured.
- **School trips:** Trip emissions are based on average occupancy assumptions, which may not reflect actual vehicle loading. Emissions from trips using school-owned vehicles are reported under the school vehicle category, not under trips, which may cause confusion.
- Mode exclusions: Cycling and walking are assumed to be zero-emissions and are not reported.

## 4.2.5. Relevant FAQs - Transport

## Q.g: "Why have staff commuting results changed compared to last year?"

Earlier versions of the calculator estimated staff commuting distance as twice the student distance. From 2025 onwards, staff distance is reported separately, making results more accurate and better aligned with actual commuting behaviour. This change may affect year-on-year comparisons (refer to section 7.2.3 for more information on this update).

#### Q.h: "What if multiple staff or students share a car or taxi?"

The current calculation assumes each student journey is made individually. Carsharing is not yet included but may be considered in future updates if reliable data can be collected consistently.

#### Q.i: "Why does my footprint increase when I add EVs?"



In previous versions, schools sometimes excluded EVs because they could not select them. Including EVs now provides a more complete picture, though emissions will be lower than for petrol/diesel vehicles. If EVs are charged off-site, those emissions are accounted for in the transport section; if charged on-site, they are captured under electricity emissions.

#### Q.j: "How do we report EVs that are charged on site?"

If EVs are charged using the school's electricity supply, the emissions are already captured under the *Energy, Waste, and Water* category. To avoid double counting, **do <u>not</u>** also record them under School Vehicles. Future versions of the calculator may integrate energy and transport reporting more seamlessly.

#### Q.k: "Do school trips really make that much difference?"

Yes. A single long-haul international flight with many passengers can exceed emissions from all daily commuting combined. This is why the calculator collects specific data on school trips, even though it takes more effort to report.

# Q.I: "Should we include trips taken in school-owned vehicles in the trips section?"

No. These are already captured in School Vehicles. Only include trips where external transport was used.

#### Q.m: "What happens if we don't know the commuting distance or mode split?"

If schools cannot provide data, benchmarks are applied based on averages for school type (Primary, Secondary, FE, etc.). While this provides a reasonable estimate, supplying school-specific commuting data is strongly encouraged to improve accuracy.



#### 4.3. Food

Food is an important source of emissions for schools, driven mainly by the type and number of hot meals served. Meals containing meat generally have the highest carbon impact, whilst fully plant-based meals have the lowest impact.

Although the calculator collects detailed inputs on meal types, the reporting output aggregates all results into a single "Food" category. At present, this category only includes hot meals. Drinks are not included, but their addition is being considered for future versions of the calculator.

## 4.3.1. Category Inclusions: Food

This category includes:

- The number of **meat-based**, **vegetarian**, **and plant-based meals** served weekly in schools.
- Additional contextual questions on meat-free days and plant-based days, are used for statistical tracking only and do not contribute to the school's carbon footprint.
- Only hot meals are included in calculations. Cold meals and drinks are excluded for now, but may be included in future versions.
- Packed lunches are excluded as they fall outside the school's operational boundary.



## 4.3.2. Table 4-3. Methods Used - Food

Emissions Source	Chosen Method	Rationale for chosen method	Alternative Methods Considered
School-provided Hot Meals (Meat- based/Vegetarian/ Plant-based)	Activity-based  Number of meals (meat/veg/plant)  x emission factor by meal type	<ul> <li>Provides clear link between meal type and emissions</li> <li>Easy for schools to report</li> </ul>	Item-level categorisation     (future option).
Meat-Free/Plant-based Days	Contextual only (not included in emissions)	Captures cultural and policy initiatives for statistics and engagement	n/a
Drinks	Currently excluded	n/a	n/a
Cold Food	Currently excluded	n/a	n/a

## 4.3.3. Key Assumptions - Food

#### Meal type classification:

- Meals are reported as meat-based, vegetarian, or plant-based.
- Each meal type is assigned an average emissions factor from the ProVeg school meals dataset.

## Hot meals only:

- All reported meals are assumed to be hot meals provided by the school.
- Cold meals are currently excluded but may be incorporated in future versions.

#### Meal counts:

- The number of meals served is reported by the school or estimated using benchmarks where data is missing.
- Meals are assumed to be standardised portions, without variation for portion size or ingredient sourcing.

#### **Packed lunches:**

• Packed lunches are excluded from the school's footprint as they are considered household emissions, outside the school's operational boundary.

#### **Avoided emissions:**

 No credit is given for avoided emissions (e.g. if schools increase plant-based meals, the benefit is reflected only in the lower meal factor, not as a separate "savings" calculation).

## 4.3.4. Limitations - Food

- **Granularity of data:** Emissions factors are averages and do not distinguish between specific ingredients (e.g. beef vs. chicken vs. pork). This may under- or over-estimate actual impacts depending on the school's menu.
- **Cold meals and drinks:** These are excluded in Version 1.2, which may under-represent the full impact of school catering. Future updates aim to include these categories.
- **Packed lunches:** Excluding packed lunches means that a shift from packed lunches to school-provided meals may appear as an *increase* in school emissions, even if the overall system impact is reduced.



- **Local variation:** The emissions factors do not capture differences in sourcing (e.g. local vs. imported foods), catering style, or waste generation.
- **Portion sizes:** The methodology assumes standardised meals; variations in portion size are not reflected.

## 4.3.5. Relevant FAQs - Food

### Q.n: "Why don't you split out beef, chicken, or other types of meat?"

To reduce burden on schools, meals are grouped into broad categories: meat-based, vegetarian, and plant-based. Splitting by ingredient (e.g. beef vs chicken) would require a level of menu detail that most schools cannot provide. Future versions of the calculator may explore this if practical methods become available. Plant-based meals will always have a lower footprint than meat-based meals.

## Q.o: "Do meat-free or plant-based days reduce my footprint in the tool?"

No. These questions are collected for statistical and engagement purposes only and do not affect a school's reported carbon footprint. They are used to track sustainability initiatives and trends across the sector.

## Q.p: "Why do my emissions increase if more pupils eat school meals?"

Packed lunches are excluded from scope. This means that when more pupils eat school-provided meals, reported emissions increase, even if the meals are vegetarian or vegan. This should not be seen as negative; it may reflect positive changes such as healthier or more sustainable food provision. For more information on this topic, refer to section 9.3.

#### Q.q: "Why are cold meals excluded?"

Currently, only hot meals are included in the footprint. Cold meals are excluded to simplify data collection and because reliable emissions factors are not yet available. Future versions of the calculator may include cold meals once appropriate factors and assumptions are developed.

## Q.r: "Does Food include drinks?"

No. At this stage, drinks are excluded from the footprint calculation. The category title reflects the intended scope, but drinks may be included in future versions as data and emissions factors become available.



#### Q.s: "What if we don't know our meal numbers?"

Where data on meal counts is missing, the calculator applies benchmarks based on averages for the school type. These benchmarks provide reasonable estimates, but schools are encouraged to provide actual meal numbers wherever possible for improved accuracy.

## Q.t: "Why don't you ask about where food is sourced from?"

This is a level of data that settings are unable to provide in a consistent manner. The types of food served make up a much larger portion of a food's emissions compared to distance travelled.



## 4.4. Purchasing and Uniform

Purchasing emissions represent all goods and services procured by schools over the course of a year. These emissions are estimated using a spend-based approach, which applies Environmentally Extended Input-Output (EEIO) factors to financial expenditure across a set of purchasing categories.

Uniform emissions are also estimated but, following the 2025 update, uniform no longer contributes to a school's total footprint figure. Instead, it is reported separately as further contextual information.<sup>8</sup>

This change brings methodology in line with the Greenhouse Gas Protocol, which defines school uniforms as out of scope for operational boundaries.

## 4.4.1. Category Inclusions - Purchasing and Uniform

This category includes:

- Purchasing: cleaning supplies, PPE, computer and electronic products, furniture, machinery and equipment, textiles, other manufactured goods, building services, IT services, security services, and other professional services.
- **Uniform**: standard school uniform items and sports kits purchased by pupils or households, collected as a separate category and excluded from the total footprint.

<sup>&</sup>lt;sup>8</sup> Despite uniform sitting outside of the operational boundary of a school under the GHGP, schools can influence the reduction of uniform emissions by introducing uniform banks, requiring less branded items, and recommending sustainable suppliers, which is why we have opted to still provide the figure.



## 4.4.2. Table 4-4. Methods Used - Purchasing and Uniform

Emissions Source	Chosen Method	Rationale for chosen method	Alternative Methods Considered
<b>Purchases</b> (goods and services)	Spend-based (EEIO°) £ spent x category specific emission factor	<ul> <li>Captures embodied emissions across a wide range of procurement categories</li> <li>Data is simple for schools to provide</li> </ul>	<ul><li>Activity-based</li><li>Supplier-specific data</li></ul>
<b>Uniform</b> (standard and sports kits)	Hybrid Method  number of students x  average uniform spend per student x  emission factors (textiles) x  (1 - % second hand uniform <sup>10</sup> )  The same logic is applied to branded sports kit.	<ul> <li>Allows schools to capture uniform-related impacts while recognising high uncertainty</li> <li>Separated from total footprint to avoid overstating scope</li> <li>Considers whether students are using pre-worn or second-hand uniform/sports kit</li> </ul>	<ul> <li>Detailed lifecycle         assessments (LCA) per         garment (not feasible at         scale)</li> <li>Supplier-specific data</li> </ul>

<sup>&</sup>lt;sup>9</sup> EEIO stands for Environmentally Extended Input-Output modelling. It links national economic data on spending in different sectors (e.g. textiles, IT, services) with environmental impact data to estimate the greenhouse gas emissions associated with each pound spent. It is widely used in carbon accounting when activity-based data is not available.

<sup>&</sup>lt;sup>10</sup> **Second-hand adjustment.** Items reported as pre-worn/second-hand are treated as having no new production emissions in the reporting year. The calculator therefore reduces uniform/sports-kit emissions in proportion to the % second-hand reported. This adjustment only applies to production emissions and excludes use-phase impacts (e.g., washing) and any minor transport/alteration emissions.

## 4.4.3. Key Assumptions - Purchasing and Uniform

#### **Spend-based approach:**

- All procurement categories are assessed using UK Government EEIO (environmentally extended input-output) conversion factors.
- Emissions are estimated by multiplying reported spend (£) by the relevant EEIO factor.
- Conversion factors are inflation-adjusted annually to ensure comparability over time.

#### **Category coverage:**

- Procurement categories include cleaning supplies, ICT, furniture, machinery, textiles, manufactured goods, building services, IT and security services, and other professional services.
- The categorisation aligns with available EEIO datasets but may not reflect school procurement classifications exactly.

#### Uniform assumptions<sup>11</sup>:

- Average spend figures are based on the Wrong Blazer Report (The Children's Society, 2020) and UK Gov textile conversion factors (UK Gov, DESNZ, 2025), covering raw material extraction, processing, manufacturing, transport, and packaging.
- Nursery & Primary: £243 average spend on uniform, £72 on sports kit.
- Secondary, All-Through, Prep & Middle: £252 average spend on uniform, £85 on sports kit.
- Uniform includes blazers, jumpers, ties, shirts, trousers, skirts, dresses, coats, bags, and school shoes.
- Sports kit includes t-shirts, shorts, jogging bottoms, skirts, sports shoes, and boots.
- **Boundary & reporting -** Uniform emissions are reported separately from the school's total footprint (contextual only) in line with GHG Protocol operational boundaries.

<sup>&</sup>lt;sup>11</sup> The uniform methodology is designed to provide an indicative estimate only. To recognise the impact of school decision-making, and stakeholder interest, uniform emissions are reported separately and excluded from the total footprint. Uniform emissions are provided to allow schools the agency to track the impact of positive action in relation to uniform.



#### Second-hand uniform:

- **Definition of "second-hand" -** Includes pre-worn items (e.g., re-used from previous years, hand-me-downs, swap shops, or purchased via resale) that **replace** a like-for-like new purchase in the reporting year.
- **Zero new production emissions** Second-hand items are assumed to avoid new garment production; therefore, their production emissions in the reporting year are set to zero.
  - Scope excluded: laundering, repair/alteration, and small-scale transport to acquire second-hand items are not included.
- **Proportional application** The % second-hand is treated as a share of total annual uniform spend avoided (i.e., a cost-weighted proxy for items). If a school reports 30% second-hand, we assume 30% of otherwise new purchases were replaced by second-hand and remove that share of emissions.
- **Uncertainty** The second-hand adjustment is a high-uncertainty estimate; it does not account for garment lifetime extension or embodied impacts from prior years. Accuracy improves when schools provide realistic % second-hand figures.

## 4.4.4. Limitations - Purchasing and Uniform

## **Spend-based methodology:**

- EEIO factors provide broad averages rather than product-specific data. This means emissions may not reflect actual supply chain differences (e.g. sustainable vs. conventional products).
- Inflation adjustments maintain comparability but may not capture real-world price volatility for specific items.

#### **Data accuracy:**

- Schools may not have precise records of category-level spend, leading to approximations.
- Misallocation of spend to the wrong category may reduce accuracy.

## **Uniform:**

 Assumed spend figures may not reflect actual purchasing behaviour at every school.



- The approach does not account for variations in uniform quality, sourcing, or frequency of purchase.
- While second-hand purchasing is now captured, reliable emissions factors for reused textiles are limited, and reductions are therefore estimates.

#### **Exclusions:**

- Indirect impacts such as packaging waste, transport from suppliers, or endof-life disposal of goods are not captured under procurement.
- Uniform remains excluded from the total footprint, which may cause confusion when comparing year-on-year results (see Section 7.2.1).

## 4.4.5. Relevant FAQs - Purchasing & Uniform

## Q.u: Why is uniform excluded from the total footprint?"

School uniform emissions are outside the school's operational boundary under the Greenhouse Gas Protocol. Uniform is purchased by households, not by the school itself. To recognise school decision-making and stakeholder interest, the calculator still estimates uniform emissions, but these are reported separately and excluded from the school's total footprint.

#### Q.v: "How are uniform emissions calculated?"

Uniform emissions are estimated using average spend assumptions (e.g. ~£243 per pupil at Primary, ~£252 at Secondary, plus sports kit costs), multiplied by DEFRA EEIO emission factors for textiles. This approach is based on averages and external sources such as The Wrong Blazer Report (The Children's Society, 2020), so results are indicative rather than precise.

#### Q.w: "What about second-hand uniform purchases?"

The calculator allows schools to record the percentage of uniform and sports kit that is second-hand or re-worn. These items are assumed to have no new production emissions, as they avoid the manufacture of new garments. When a school enters a percentage of second-hand uniform, the calculator automatically reduces emissions in proportion to that value.

This means that if 30% of uniforms are second-hand, emissions are only calculated for the remaining 70% of new purchases. This approach reflects the environmental benefit of reusing clothing while recognising that detailed life-cycle data for re-used garments are not yet available.



Uniform emissions continue to be reported separately from the school's total footprint to avoid overstating the school's direct emissions, in line with GHG Protocol guidance.

## Q.x: "Why do you use spend-based data for purchases instead of item-level data?"

Spend-based EEIO modelling links expenditure to average environmental impacts across economic sectors. It is practical for schools to report (all schools track spend), whereas item-level or supplier-specific data would be too complex and inconsistent. EEIO methods are widely used in corporate carbon accounting.

## Q.y: "Do fluctuations in spend affect my results?"

Yes. Because the calculation is based on spend, factors such as inflation, bulk purchasing, or unusual one-off expenses may affect results year-to-year. This is a limitation of the EEIO method, but over time results still give a good indicator of procurement-related impacts.

#### Q.z: Why don't you ask about second-hand purchases in other categories?

Reliable factors for refurbished goods (e.g. ICT, furniture) are limited. The tool may expand to include these in future versions.

## Q.aa: "What if we don't know our exact spend?"

If spend data is missing, the calculator applies benchmarks based on average spend per pupil for each school type. These benchmarks ensure that schools can still produce a complete footprint, though accuracy is lower than when using actual spend data.



## 5. Emissions Factor Sources

## 5.1. List of Data Sources

The calculator uses a range of established emissions factors (EFs) drawn from national and international datasets. These provide the conversion values needed to translate school activity data (e.g. kWh of electricity, litres of fuel,  $\pounds$  of spend) into greenhouse gas emissions (kgCO<sub>2</sub>e).

The table below summarises the primary data sources used in each calculator category.

**Table 5-1: Summary of Emission Factor Sources by Category** 

Calculator Category	Emission Factor Source	Notes
<b>Energy</b> (fuel, gas, electricity, renewables <sup>12</sup> )	UK Government GHG Conversion Factors (DESNZ, 2025)	<ul> <li>Updated annually</li> <li>Includes fuel combustion by fuel type and grid-purchased electricity (location-based)</li> </ul>
Waste	UK Government GHG Conversion Factors (DESNZ, 2025)	<ul> <li>Updated annually</li> <li>Includes waste-type and waste treatment method<sup>13</sup> (e.g., landfill, recycling, incineration, composting, anaerobic digestion) and water supply &amp; treatment</li> </ul>
Water	UK Government GHG Conversion Factors (DESNZ, 2025)	<ul><li>Updated annually</li><li>Includes water supply &amp; treatment</li></ul>

<sup>&</sup>lt;sup>12</sup> Emissions from on-site renewable generation (e.g. solar PV) are reported separately as contextual information. In line with the GHG Protocol, the calculator does not account for avoided emissions from grid displacement. These benefits are attributed to the wider electricity system and end users of the displaced grid power, not directly to the school generating it.

<sup>&</sup>lt;sup>13</sup> Emissions factors for waste treatment reflect the direct impacts of collection, transport, and processing (e.g. landfill, recycling, incineration, composting, anaerobic digestion). In line with the GHG Protocol, the calculator does not include avoided emissions from recycling or energy recovery. These benefits are attributed to the next user of the recovered materials or energy, not the school producing the waste.



Transport (school vehicles, commuting, trips)	UK Government GHG Conversion Factors (DESNZ, 2025)	<ul> <li>Updated annually</li> <li>Factors by vehicle type and passenger km for road, rail, air, and sea.</li> </ul>
Food	Proveg UK dataset (school meal factors)	<ul> <li>Not updated annually</li> <li>Provides average emissions per meal type (omnivore, vegetarian, vegan).</li> </ul>
Procurement (purchases)	UK EEIO Conversion Factors (2018-2025, by SIC Code)	<ul> <li>Spend-based</li> <li>Inflation-adjusted to 2025 prices</li> <li>Covers goods and services categories</li> </ul>
Uniform	DEFRA EEIO textile factors + The Wrong Blazer Report (2020)	<ul><li>Based on assumed average spend per pupil</li><li>Reported separately from totals.</li></ul>
Supplementary sources (where DEFRA gaps exist)	IEA, Ecoinvent, EXIOBASE	Used selectively where national factors are unavailable.

## **5.2. Update Process and Frequency**

The *Count Your Carbon* calculator relies on published emissions factors to ensure results remain credible and up to date. These factors are reviewed and updated annually, in line with the release of new datasets.

- **UK Government GHG Conversion Factors (DESNZ):** Updated every year, historically between June-August. These are applied to energy, fuel, transport, waste, and water categories. The calculator is refreshed to use the latest version at the start of each academic year.
- **ProVeg School Meals Dataset:** Provides emissions factors for omnivore, vegetarian, and vegan meals. This dataset is currently static but will be reviewed periodically. If improved meal-based datasets become available, they will be adopted.
- **UK EEIO Conversion Factors:** Used for spend-based purchasing categories. These are updated less frequently than activity-based factors but are adjusted annually for inflation to ensure comparability over time.



- Supplementary Sources (IEA, EXIOBASE, Ecoinvent): Where UK Gov GHG Conversion Factors does not provide a relevant factor, the most
- recent version of these datasets is used. These are reviewed at the same time as the annual update.

In practice, this means that each September (aligned with the school year), the calculator is refreshed with the most up-to-date emissions factors available. This ensures schools always use the latest science and data available.

## 5.3. Quality Assurance

Before new emissions factors are published in the tool, they undergo a structured quality assurance process:

- 1. **Source verification** Values, units, and scope are cross-checked against the published datasets.
- 2. **Consistency checks** Year-on-year changes are reviewed, with explanatory notes added where shifts are significant.
- 3. **Model integration** Sample data is tested to confirm correct unit conversions and multipliers in the calculator's underlying model.
- 4. **Implementation testing** Once loaded into the online tool, the development team<sup>14</sup> carries out a dedicated testing period to confirm factors are correctly applied across all categories.
- 5. **Peer review** Final factors and assumptions are reviewed internally by PNZ Advisory before release. Material changes are highlighted in the methodology report and communicated to the client.

This process ensures that all emissions factors used in *Count Your Carbon* are robust, transparent, and traceable.

<sup>&</sup>lt;sup>14</sup> Details for the development team can be found in section 8.1 - Development Team and Partners.



## 6. Data Handling

## **6.1. Treatment of Missing Data**

In line with the principle of transparency<sup>15</sup>, the *Count Your Carbon* calculator has been designed to ensure that schools can complete their carbon footprint assessment even where some activity data is unavailable. Where a school cannot provide data for a required question, the calculator applies a **benchmark value** in place of missing information.

These benchmarks are derived from aggregated and cleansed datasets of school submissions across the UK (see Section 6.2), incomplete or poor-quality reports are excluded from this process to maintain integrity. The use of benchmark data is systematically tracked within the tool, allowing both the development team and end users to understand how much of a school's footprint is based on school-specific data versus sector averages.

In the latest version of the calculator (*version 1.2*), this has been further strengthened by the introduction of a **traffic light warning system**, which indicates the proportion of an assessment that relies on benchmark data. This provides schools with **immediate feedback** on the quality of their submission and encourages them to increase the use of primary data in future years.

This approach provides schools with immediate feedback on the quality of their data and encourages continuous improvement in future assessments. For further detail on how benchmarks affect year-on-year comparisons, see Section 7.3.

## 6.2. Benchmark Methodology

Benchmarks are an essential feature of the calculator, as they provide a fallback where primary data cannot be supplied. The methodology for generating benchmarks is robust and transparent, ensuring they reflect realistic conditions across the UK school sector. For details of the emissions factors underpinning benchmarks, see Section 5.

<sup>&</sup>lt;sup>15</sup> Refer to section 3 for more information on the methodology principles.



#### 6.2.1. Annual Refresh

Benchmarks are refreshed annually in line with the academic year. Each year, the full dataset of school submissions is exported and cleansed. Duplicate reports, incomplete submissions, and implausible entries are removed to ensure reliability.

#### 6.2.2. Benchmark Creation Process

Each year, the following process is applied:

## **Step 1: Data Collection**

• The full dataset of school submissions is exported at the end of each academic year.

#### Step 2: Data Cleansing

- Duplicate reports, incomplete submissions, and implausible entries are removed.
- Outliers are identified using statistical tests (e.g. percentile filters, confidence intervals) and excluded.

#### Step 3: Analysis

- Averages are calculated for each emissions source.
- For complex categories (fuel, waste, trips), composite averages are generated to reflect sub-categories.
- For simpler categories (electricity, commuting, meals, purchasing), straightforward averages are used.

## **Step 4: Segmentation by School Type**

- Benchmarks are segmented into groups such as primary, secondary, nursery, further education, and preparatory schools.
- SEND and PRU schools are benchmarked independently but flagged as lower confidence due to smaller sample sizes and unique nature of each educational setting.

#### **Step 5: Benchmark Summary**

- Results are compiled into a dedicated dataset which records the average value, sample size, and emissions factor applied.
- These benchmark values are then integrated into the calculator for the September release.



## **6.2.3.** Application in the Calculator

When a school selects "I don't know, use the average" for a question, the tool automatically applies the relevant benchmark. In *Version 1.2* of the calculator, benchmark use is flagged to schools through a **traffic light system**, giving immediate feedback on how much of their footprint relies on benchmarks. Where possible, the number of "I don't know" options have been reduced, encouraging schools to provide more of their own primary data.

This process ensures that benchmarks remain evidence-based, up to date, and representative of the school population as a whole. It also maintains comparability across schools, while incentivising greater use of primary data over time.

## 6.3. Data Storage and Processing

#### 6.3.1. Personal data

**Keep Britain Tidy** is committed to protecting the privacy<sup>16</sup> and security of your personal information. Our privacy notice (Keep Britain Tidy, 2025) describes how we collect and use personal information about you, during and after your working relationship with us, in accordance with the UK General Data Protection Regulation (UK Government, 2016).

Count Your Carbon captures the following pieces of personal data:

- Name
- Email address
- Phone number (optional).

This information is used only to update schools on the tool, their results, and related campaigns.

## 6.3.2. Data sharing

To help us advocate for change at a regional and national level, **Keep Britain Tidy**, the data controller, may share the following information provided in the *Count Your Carbon* tool with local and national government:

 Details about your setting including school name, address, and type of setting

<sup>&</sup>lt;sup>16</sup> To read more about how personal data is handled, view the Keep Britain Tidy Privacy Policy: <a href="https://www.keepbritaintidy.org/privacy-policy">https://www.keepbritaintidy.org/privacy-policy</a> - (Keep Britain Tidy, 2025)



- Number of pupils
- The response to each question about carbon usage
- Your setting's carbon footprint
- No personal data will be shared

If you are an Academy setting, the above may be shared with your trust as well as local and national government.

## 6.3.3. Data storage

All data is managed within the *Count Your Carbon* system by **Carbon Creative**<sup>17</sup>. Storage is on Amazon AWS cloud services (Elastic Compute EC2 and Relational Database Service RDS). All servers are located in the EU-WEST Amazon AWS region. No data is transferred outside of the UK or EU.

<sup>&</sup>lt;sup>17</sup> For more information on the development team, please refer to section 8.1



## 7. Comparability Over Time

## 7.1. Guidance for Year-on-Year Comparison

The *Count Your Carbon* calculator is updated annually to reflect improvements in data quality, emissions factors, and methodology. While these updates strengthen the accuracy and robustness of results, they also mean that direct year-on-year comparisons can sometimes be challenging.

Each year, certain questions may be amended, simplified, or removed based on stakeholder feedback<sup>18</sup> and developments in carbon accounting best practice. Even minor changes in wording or calculation logic can result in small changes to a school's, previously reported, carbon footprint.

Schools should therefore use results primarily to track overall trends and areas of high impact, rather than expecting identical comparability across different versions of the calculator.

It is important to recognise that **all carbon accounting is inherently an estimate**. Emissions can **never be measured with 100% accuracy**, as they rely on data availability, assumptions, and emissions factors that change over time.

The aim of *Count Your Carbon* is to **provide the most accurate estimate possible with the information schools can realistically provide**. A strong estimate of your setting's emissions allows you to prioritise carbon-cutting actions which will have the most significant impact.

This sometimes means results may change between reporting years as methodology is refined and accounting practices are updated.

## 7.1.1. Ensuring Comparability

To support fairer comparison across reporting years:

All historic reports generated in *Count Your Carbon (CYC)* have been retrospectively updated (as of September 2025) to remove uniform from the total footprint and

<sup>&</sup>lt;sup>18</sup> More information on how stakeholder feedback is considered can be found in section 8.3.



present it separately. This means that schools using the latest version of CYC will see consistent totals across both past and future reports.

Schools should therefore always refer to the latest version of their report when comparing year-on-year performance. Older reports (downloaded prior to September 2025) may show totals that include uniform and should not be used for direct comparison.

When communicating results, schools are encouraged to clarify whether figures "include uniform" or "exclude uniform", particularly if they are referencing older materials. See also Section 3.5.2 on operational boundaries and Section 4.4 for uniform methodology.

#### **Key Message for Schools**

The annual updates are designed to improve accuracy and alignment with best practice. While this can occasionally lead to differences in results, the Count Your Carbon team is committed to providing transparent explanations of changes. Schools should focus on the relative size of different emissions sources and the direction of change over time, rather than treating the footprint as a fixed and unchanging number.

## 7.2. Key Changes Affecting Comparisons

#### 7.2.1. Treatment of Uniform Emissions

A specific area of change in  $Version\ 1.2^{19}$  relates to how school uniforms are treated within the methodology:

- In *Version 1.1* (2024/25), uniform emissions were included in schools total carbon footprint. This approach was originally adopted to highlight the additional environmental impact of clothing purchased specifically for school use.
- Following expert review, stakeholder feedback, and global carbon accounting guidelines<sup>20</sup>, uniform has now been recognised as outside the operational boundary<sup>21</sup> of the school.

<sup>&</sup>lt;sup>21</sup> Refer to Section 3.5 for further information around operational boundaries.



<sup>&</sup>lt;sup>19</sup> Version 1.2 was launched in September 2025 for the academic year 2025/26.

<sup>&</sup>lt;sup>20</sup> See Section 3.4 for more information on accounting standards used in this methodology.

- Emissions from uniform purchasing technically sit with the individual or household, not the school. However, because some schools require specific uniform to be worn, the calculator continues to account for these emissions, but they are now reported separately from the school's total footprint.
- From *Version 1.2* (2025/26) onwards, uniform emissions will no longer be included in a school's total footprint. Instead, they will be reported separately. This will support schools to understand the impact of uniform and explore potential positive action such as implementing uniform banks, whilst allowing them to understand where there may be limitations in their field of control.

## **Key Message for Schools**

Uniform emissions are still calculated but are reported separately from the school's footprint. Always check whether figures "include" or "exclude" uniform before making comparisons.

## 7.2.2. Addition of Battery/Hybrid Electric Vehicles

- Earlier versions of the calculator did not allow schools to report use of battery electric or hybrid vehicles.
- From *Version 1.2* (2025/26) onwards, these vehicle types can be selected, improving accuracy in transport-related emissions.
- This change will generally result in a **decrease in reported totals** for schools that had previously recorded these vehicles as petrol or diesel vehicles, since electric and hybrid vehicle have lower associated emissions.
- For schools that had previously excluded battery or hybrid vehicles altogether (due to the lack of an option), totals may **increase slightly**, as these journeys are now properly accounted for rather than omitted.

## 7.2.3. Staff and Student Commuting Data

- Prior to December 2024, the calculator asked:
   "In the last 12 months, what was the <u>furthest distance</u>, in miles, a student might travel to get to school?"
- This was changed to:
   "In the last 12 months, what was the average distance, in miles, a student might travel to get to school?"



- The change impacted both student and staff commuting emissions, as the staff distance was previously estimated as 2x student distance.
- In *Version 1.2* (2025/26), the calculator now includes a specific question for staff commuting distance. This provides a more accurate estimate, as staff travel patterns often differ substantially depending on the school type, age group, or location.

## 7.2.4. Removal of Composting Questions

- In earlier versions of the calculator, schools were asked whether they composted food or garden waste on-site, and to estimate the proportion of waste managed in this way. However, these questions have now been removed in Version 1.2 (2025/26).
- This decision was taken for two main reasons:
  - Confusion for users Schools were uncertain how to record composting activity, particularly where food waste was collected by a contractor for industrial composting or anaerobic digestion. Some schools interpreted "on-site composting" as meaning zero bins collected, while others reported both bins and 100% composting. This led to inconsistent and unreliable data.
  - Negligible impact on results The emissions associated with on-site composting are very small compared to other waste treatment routes. Furthermore, UK Government published emissions factors apply to industrial-scale composting, not small-scale school compost heaps, meaning that applying these factors would not give a representative result.

For these reasons, composting has been removed from the question set until a more robust and user-friendly approach can be implemented. Schools are still encouraged to compost as part of good environmental practice, but this is no longer included in the carbon footprint calculation.

# 7.3. Adjustments to Methods, Factors, and Question Sets

Alongside the major changes outlined above, *Version 1.2* (2025/26) introduces several smaller refinements that improve accuracy, usability, and future readiness of the calculator. These adjustments do not fundamentally alter the scope of reporting but are important for maintaining consistency and reliability.



## 7.3.1. Emission Factor Updates

All activity-based categories (energy, transport, waste, and water) have been refreshed with the **2025 UK Government GHG Conversion Factors**. Spend-based categories have been updated with the latest EEIO factors, inflation-adjusted to 2025 values, ensuring that results remain comparable over time.

## 7.3.2. Refinements to Benchmarking

Benchmark datasets have been recalculated using the most recent year of school submissions. Outliers have been removed to improve reliability, and in some cases the "I don't know" response option has been withdrawn to encourage schools to provide primary data wherever possible.

## 7.3.3. Simplification of Question Sets

Minor wording changes have been introduced across several categories (including energy, waste, and purchasing) to reduce ambiguity and improve consistency. While these adjustments do not materially affect emissions outcomes, they reduce the risk of misinterpretation and support a smoother user experience.

## 7.3.4. Future proofing

Additional data fields have been incorporated into the back end of the calculator to prepare for future developments. These include options for reporting on cold meals and drinks in the Food category, and more detailed segregation of waste streams. While these fields are not currently active, their inclusion supports the efficient integration of future updates without disruption to existing results.

#### **Key Message for Schools**

These refinements are designed to improve data quality and usability without significantly altering reported totals. Schools can therefore interpret results with confidence while benefiting from a more streamlined user experience.



## 8. Governance and Quality Assurance

## 8.1. Development Team and Partners

The credibility of the *Count Your Carbon* calculator is underpinned by a collaborative development model, bringing together expertise in sustainability, education, digital design, and stakeholder engagement. Each partner organisation plays a defined role in ensuring that the tool remains accurate, user-friendly, and trusted across the UK education sector.

## 8.1.1. Keep Britain Tidy

Count Your Carbon is brought to you by Keep Britain Tidy (KBT), the nation's leading environmental charity. KBT works with individuals, schools, businesses, and local authorities to reduce waste, improve places, and help people live more sustainably. Its education programmes reach thousands of schools each year, helping embed environmental action into learning.

#### **Role in Count Your Carbon**

Project lead and overall custodian of the tool. KBT is responsible for aligning the calculator with its wider environmental education initiatives and ensuring that it meets the needs of schools nationwide.

## 8.1.2. Eco-Schools England

Eco-Schools is the world's largest environmental schools programme, delivered in over 100 countries. In England, the programme has been operated by Keep Britain Tidy since it's inception in 1994. Over 50% of schools nationally are registered with the programmer, with over a million pupils attending active schools annually. The programme empowers young people to take environmental action and provides schools with a structured framework for sustainability.

#### **Role in Count Your Carbon**

Provides direct engagement with teachers and pupils, helping to integrate Count Your Carbon into classroom learning and supporting its role as an educational resource.



## 8.1.3. PNZ Advisory

PNZ Advisory (formerly Arete Zero Carbon) is part of the PNZ Group, a national leader in net zero strategy and carbon management. PNZ Advisory brings extensive expertise in greenhouse gas accounting, benchmarking, assurance, and net zero planning. With over 25 years of combined experience, its team supports businesses, schools, and public bodies in meeting carbon reduction targets aligned with the GHG Protocol and UK quidance.

#### **Role in Count Your Carbon**

Technical partner providing carbon accounting expertise. PNZ Advisory is responsible for the methodological design of the calculator, emissions factor selection, benchmarking approach, and assurance that the tool aligns with the GHG Protocol and wider UK guidance.

#### 8.1.4. Carbon Creative

Carbon Creative is the design and digital agency responsible for building, maintaining, and developing the *Count Your Carbon* tool. With a track record in creating user-friendly digital solutions for environmental and social impact, they ensure that the platform is both technically robust and accessible to all schools.

#### **Role in Count Your Carbon**

Digital development partner responsible for the online platform. Carbon Creative ensures that the calculator is technically robust, accessible, and regularly updated in line with new methodological developments.

#### 8.1.5. Let's Go Zero

Let's Go Zero is a national campaign uniting schools, teachers, pupils, and parents to drive action towards net zero by 2030. The campaign provides schools with practical support to cut carbon, delivers national advocacy, and represents school voices to government.

#### **Role in Count Your Carbon**

Advocacy and campaign partner, supporting the promotion of the tool across the UK and helping to embed it within the Department for Education's Sustainability and Climate Change Strategy.



This partnership model ensures that *Count Your Carbon* is grounded in carbon accounting best practice while remaining accessible and relevant to schools of all sizes and types.

## 8.2. Methodology Review Process

The methodology behind *Count Your Carbon* is subject to both internal and external review to ensure it remains robust and relevant. Internal checks are carried out by the development partners (see Section 5.3 for details on quality assurance of emissions factors and data). External review is provided through consultation with stakeholders and expert advisors (see Section 8.3).

This process ensures that the methodology is transparent, evidence-based, and aligned with best practice in carbon accounting.

## 8.3. Stakeholder Feedback

Stakeholder feedback is an essential component of the *Count Your Carbon* update cycle. Each year, the development team gathers and evaluates input from schools and partners to ensure that the tool continues to meet user needs and reflects best practice. Feedback is collected through several channels:

- Feedback sessions Targeted online workshops are held at the start of
  each update cycle, engaging groups such as MAT and faith-group
  Sustainability Leads, external advisors (including Let's Go Zero Climate
  Action Advisors and Climate Ambassadors), and school staff. These sessions
  provide opportunities to test new proposals and gather practical insights.
- Feedback log Comments and suggestions received by email or through other informal channels are recorded in a central log. These are reviewed systematically during the scoping phase of each update cycle to determine feasibility and priority.
- **Surveys** Where significant changes to methodology or user experience are under consideration, surveys are distributed to a broad group of schools and partners. This ensures a representative view is captured before major developments are implemented.

## 8.3.1. Assessing Feedback

When assessing feedback, the development team considers:



- 1. Whether the issue requires urgent resolution or can be addressed in the next update cycle.
- 2. Whether the feedback requires digital development, and if so, whether this can be incorporated into the current version or must be built into a future release.
- 3. Whether the concern can be addressed through supporting guidance or copy changes.

Feedback is then categorised and either actioned immediately, scheduled for the next update, or logged for inclusion in a future version. This systematic approach ensures that *Count Your Carbon* evolves in response to user needs, while maintaining methodological integrity and consistency across reporting years.



# 9. Exclusions, Limitations, and Future Developments

## 9.1. Avoided Emissions

#### 9.1.1. Definition

Avoided emissions are greenhouse gas (GHG) emissions that do not occur because a lower-carbon option is chosen instead of a more carbon-intensive one. In practice, they highlight the environmental benefit of choosing one activity over another.

For example, reusing second-hand uniforms instead of buying new ones avoids the emissions from producing new textiles. Similarly, offering more plant-based meals can avoid emissions linked to meat and dairy production.

## 9.1.2. Why They Matter

Avoided emissions can be a useful way to illustrate the positive impact of sustainable choices. They are increasingly used in climate action planning to show how products, services, or behaviours can reduce future emissions compared to business-as-usual. The Carbon Trust notes that avoided emissions can help organisations explain the benefits of innovative solutions, provided that the assumptions behind them are transparent and realistic.

## 9.1.3. Why They Are Not Included in Count Your Carbon

Despite their value for education and decision-making, avoided emissions are not included in the *Count Your Carbon* footprint results. This is because:

- They fall outside a school's footprint avoided emissions occur in the wider system (e.g., factories making clothes), not in the school's own activities.
- **They rely on assumptions** estimating avoided emissions requires guessing what would have happened otherwise, which may vary between schools and reduce comparability.
- **Standards recommend exclusion** the GHG Protocol, ISO standards, and the Carbon Trust all state that avoided emissions should not be added into Scope 1, 2, or 3 reporting totals. They should instead be presented as separate, contextual information.



#### 9.1.4. How Schools Should Use This Information

Although avoided emissions are excluded from the formal footprint, schools are encouraged to recognise and share them in other ways:

- Use them in case studies or class projects to highlight the benefits of reuse, recycling, or low-carbon diets.
- Treat them as an educational tool for raising awareness about everyday choices.
- Record them separately if useful, but keep them distinct from official Scope 1-3 footprint reporting.

In short, avoided emissions are a valuable concept for demonstrating progress and inspiring change, but they are not part of the measured carbon footprint within *Count Your Carbon*.

## 9.2. Renewable Energy and Zero Emissions

## 9.2.1. Clarifying Boundaries and Limitations

Renewable energy and zero-emission technologies are an important way for schools to cut their carbon footprint and demonstrate climate leadership. Examples include on-site solar panels, switching heating systems to heat pumps, or purchasing electricity from a renewable supplier.

However, there are important boundaries to keep in mind:

- The calculator currently only reports on the *operational* emissions from energy use. It does not include the "embodied" emissions from manufacturing or installing renewable equipment.
- Data quality varies. Some schools have detailed information about their systems, while others only know whether they have a "green" tariff. This makes comparisons difficult.
- For schools buying 100% renewable electricity from their supplier, emissions are reported as zero under the current market-based approach. However, the underlying UK grid still has a carbon intensity, which is why standards such as the GHG Protocol encourage reporting both market- and location-based figures.

Future versions of *Count Your Carbon* will look to improve reporting by offering both market- and location-based results, in line with international best practice. This will



allow schools to demonstrate the value of renewable procurement while still meeting compliance requirements (e.g., SECR for multi-academy trusts).

# 9.2.2. Battery Electric Vehicles (BEVs) and Plug-in Hybrid Vehicles (PHEVs)

In Version 1.2 (2025/26), schools can now record journeys made using BEVs and PHEVs, both for school-owned vehicles and for staff and student travel. This improves accuracy compared to earlier versions, which only allowed petrol or diesel vehicles.

At present, benchmark data for these vehicle types is limited. If a school cannot provide data and selects the benchmark, the calculator applies a placeholder assumption of zero for BEVs and PHEVs until sufficient real-world data is available from future submissions (expected from 2026 onwards). Where schools provide actual data, recognised emissions factors are applied.

This approach ensures that the tool is forward-looking, enabling schools to record EV adoption now, while also building the dataset needed for accurate benchmarking in the future.

## 9.2.3. Location vs Market-Based Emission Reporting

The Count Your Carbon calculator currently applies a **hybrid approach** to electricity reporting, combining elements of both the *location-based* and *market-based* methods defined by the GHG Protocol.

- **Default (location-based)** Where no renewable tariff is reported, or the school selects "No," the calculator applies the *UK Government grid average emission factor*. This represents the carbon intensity of electricity supplied from the national grid, regardless of supplier.
- Renewable tariff (market-based) If a school indicates that 100% of its purchased electricity is from a certified renewable or "green" tariff, the calculator applies a market-based factor of "zero emissions". This assumes that the supplier provides verified renewable electricity backed by Renewable Energy Guarantees of Origin (REGOs) or equivalent certification.

This approach allows schools to recognise their renewable electricity purchases, but it also creates some limitations:

• Partial or mixed tariffs cannot currently be reflected (i.e., the response is a simple Yes/No).



- The model does not yet distinguish between supplier-certified renewable electricity and on-site generation (e.g., solar PV), which is accounted for separately.
- As a result, schools answering "Yes" receive a net-zero total for purchased electricity, while those answering "No" receive a grid-average total.

In future versions, the calculator will move towards **dual reporting**, providing both:

- Market-based results, which recognise certified renewable procurement choices; and
- Location-based results, which remain consistent across all schools for comparability.

This improvement will enhance transparency, support alignment with the GHG Protocol Scope 2 Guidance, and help schools meet reporting obligations such as SECR (UK Gov, no date).

## 9.3. Packed Lunches vs School Meals

# 9.3.1. Why emissions may rise with more school-provided meals.

When comparing emissions from packed lunches and school-provided meals, it is important to understand how the system boundaries affect results. Packed lunches sit under the operational boundary of the individual, whereas school meals sit under the operational boundary of the school. Therefore, if students opt to switch from packed lunches to school meals, increasing the total number of school meals served in total, reported emissions will increase.

#### This is because:

- More meals are being served in school
- School meals may include carbon-intensive ingredients such as meat or dairy.
- Additional food waste may be generated if portions are not well matched to student appetites.

At the same time, school meals can also provide environmental benefits, including:

- Bulk purchasing, which often reduces packaging and transport emissions.
- Menu planning that can prioritise more plant-based or lower-carbon options.
- Greater oversight and opportunity to integrate sustainability into food choices.



#### 9.3.2. Treatment in the Calculator

Currently, the *Count Your Carbon* calculator includes hot meals provided by the school but does not include packed lunches. This exclusion reflects the wide variation in ingredients, portion sizes, and packaging across packed lunches, which makes it difficult to apply reliable or representative emission factors.

As a result, schools may see their emissions totals rise if they expand meal provision, even if the meals offered are vegetarian or plant-based. This does not mean sustainability has worsened—it reflects the fact that packed lunches are currently outside the reporting boundary.

## 9.3.3. Future Developments

Future updates to the calculator will consider ways to include packed lunches (and cold meals more broadly) by developing more reliable emission factors and assumptions. Until then, schools should view increases linked to meal provision as contextual, and focus on the opportunity to influence pupil diets, reduce food waste, and promote sustainable food choices through the meals they provide.

#### **Key Message - Packed Lunches vs School Meals**

Increases in reported emissions from providing more school meals do **not** mean sustainability has worsened. Packed lunches are currently excluded from the calculator, so shifting pupils from packed lunches to school meals will raise totals even if those meals are lower carbon. Schools should view this as an opportunity to influence diets, reduce waste, and promote sustainable choices.



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## **Appendix A - Frequently Asked Questions**

## A.1. General Methodology Questions

Schools may approach the carbon calculator with various levels of experience in sustainability and carbon accounting. **The FAQ** section is designed to answer common questions that school staff, students, climate advisors or administrators might have about how the calculator works, what the results mean and how to utilise the findings to act in the future.

By providing clear explanations, the FAQs aim to make the calculator accessible to everyone in the school community and support confident decision-making.

Question	Answer
Who is Count Your Carbon for?	Count Your Carbon has been designed for use by UK schools, colleges and nurseries.
Can Count Your Carbon be used for boarding schools?	No, Count Your Carbon is not designed for boarding schools. However, boarding schools can still use the tool to measure the carbon impact of their daytime, academic-based operations.
Can Count Your Carbon be used by schools outside of the UK?	No. Count Your Carbon has been designed specifically for use by schools in the UK only.
Do we need to be an Eco-School to use Count Your Carbon?	No, although we do encourage schools looking to achieve a green flag to use Count Your Carbon as part of your Eco-Schools work.

Who should oversee calculating our carbon footprint?

Anyone with permission to collect and input data on behalf of the school - whether a Headteacher, Governor, invested parent, or volunteer, can complete Count Your Carbon. However, gathering the necessary information is a team effort.

You'll likely need support from:

- The school Finance Manager (or equivalent)
- The school Site Manager (or equivalent)
- The school administrative team
- Your school's Catering Manager or company

You will also need to carry out some surveys with both staff and students.

If you are a local authority-maintained setting, or part of a Multi-Academy Trust, some of this information may be held centrally. If you are struggling to get hold of any of the information internally, we would recommend getting in touch with your local authority or trust contact.

What if we're missing data for some of the questions?	We strongly encourage schools to provide primary data wherever possible. By contributing your data, you'll help improve the benchmarks, making future calculations more accurate for all schools. This collective effort will lead to a more reliable tool over time.  Most of the questions provide the option to 'select an average'. This option uses data from over 2000 schools to estimate an answer, allowing you to complete your calculation.  Please note:  • The 'select an average' option is not available for questions which require a 'yes' or 'no' answer. In these cases, we recommend that you assume the answer is 'no'.  • Using the 'select an average' option means that some areas of your footprint will be estimated. You should keep this in mind when reviewing your results.  • If you use over 8 averages throughout your calculation, you will be advised to gather more data before completing your calculation. You can choose to continue, however your footprint will be highly estimated.	
How often should we repeat the calculation?	We recommend recalculating your carbon footprint at least every 12 months. This will allow you to track your progress as you implement carbon-cutting measures.	
What emissions factors do you use?	We use a combination of emissions factor databases, including but not limited to the UK Government GHG Conversion Factors, IEA, Ecoinvent, EXIOBASE, ICE, Rejoose, and Greenly Expert. These sources ensure the tool provides accurate and reliable calculations.	

## A.2. Category-Specific Questions

In addition to general questions about how the calculator works, schools or individuals may have more detailed queries about specific categories of emissions. These categories - energy, travel, food, waste and procurement represent the main areas of school life where emissions are generated.

The category-specific questions are designed to provide practical guidance for schools in each of these areas. They help explain how data should be collected and why these activities matter for carbon accounting.

CYC Reporting Category	Question	Answer
Energy, Waste and Water	What if we don't know our exact energy, waste, or water use?	Where primary data is missing, the calculator uses benchmarks based on averages for your school type. These benchmarks provide a reasonable estimate, but schools are encouraged to input actual data wherever possible, as this improves accuracy.
Electricity	Why do my energy emissions not decrease if we install solar panels?	On-site renewable electricity generation is reported separately as contextual information. The emissions from purchased grid electricity are still based on your billed consumption. This avoids double counting and ensures results are consistent with GHG Protocol guidance.
Electricity	What happens if we buy 100% renewable electricity?	If your school purchases 100% renewable electricity through a recognised green tariff, your emissions from purchased electricity are reported as zero in the calculator under the market-based method. However, figures may differ if you compare them to the location-based method (UK grid average), which

		reflects actual grid supply. Future versions of the calculator will report both market-based and location-based results side by side, in line with GHG Protocol best practice.
Waste	Why aren't recycling bins segmented by material?	At present, recycling is consolidated into a single category. This is because not all schools can separate waste streams, and many waste providers sort materials after collection. Including material-specific options would increase reporting complexity and create inconsistent data. This may be introduced in future versions when reliable factors and data collection practices are available.
Waste	Is the transport of waste included in the footprint?	Yes. For general waste, emissions factors cover the full lifecycle from collection and transport through to disposal ("gate to grave"). For recycling, factors include transport to an energy recovery or materials reclamation facility only, in line with GHG Protocol guidance.
Water	Should waste water/sewerage charges be included in the water usage?	Yes. Report the total charges on your bill, covering both supply and treatment, as the factors account for both services.
Transport	Why does my footprint increase when I add EVs?	In previous versions, schools sometimes excluded EVs because they could not select them. Including EVs now provides a more complete picture, though emissions will be lower than for petrol/diesel vehicles. If EVs are charged offsite, those emissions are accounted for in the transport section; if charged onsite, they are captured under electricity emissions.

School vehicles	How do we report EVs that are charged on site?	If EVs are charged using the school's electricity supply, the emissions are already captured under the Energy, Waste, and Water category. To avoid double counting, do not also record them under School Vehicles. Future versions of the calculator may integrate energy and transport reporting more seamlessly.
School vehicles/school trips	Should we include trips taken in school-owned vehicles in the trips section?	No. These are already captured in School Vehicles. Only include trips where external transport was used.
School trips	Do school trips really make that much difference?	Yes. A single long-haul international flight with many passengers can exceed emissions from all daily commuting combined. This is why the calculator collects specific data on school trips, even though it takes more effort to report.
Staff commuting	Why have staff commuting results changed compared to last year?	Earlier versions of the calculator estimated staff commuting distance as twice the student distance. From 2025 onwards, staff distance is reported separately, making results more accurate and better aligned with actual commuting behaviour. This change may affect year-on-year comparisons (refer to section 7.2.3 for more information on this update).
Staff and student commuting	What happens if we don't know the commuting distance or mode split?	If schools cannot provide data, benchmarks are applied based on averages for school type (Primary, Secondary, FE, etc.). While this provides a reasonable estimate, supplying school-specific commuting data is strongly encouraged to improve accuracy.

Staff and student commuting	What if multiple staff members or students share a car or taxi?	The current calculation assumes each student journey is made individually.  Car-sharing is not yet included but may be considered in future updates if reliable data can be collected consistently.
Food	Why don't you split out beef, chicken, or other types of meat?	To reduce burden on schools, meals are grouped into broad categories: omnivore, vegetarian, and vegan. Splitting by ingredient (e.g. beef vs chicken) would require a level of menu detail that most schools cannot provide. Future versions of the calculator may explore this if practical methods become available.
Food	Do meat-free or plant-based days reduce my footprint in the tool?	No. These questions are collected for statistical and engagement purposes only and do not affect a school's reported carbon footprint. They are used to track sustainability initiatives and trends across the sector.
Food	Why do my emissions increase if more pupils eat school meals?	Packed lunches are excluded from scope. This means that when more pupils eat school-provided meals, reported emissions increase, even if the meals are vegetarian or vegan. This should not be seen as negative; it may reflect positive changes such as healthier or more sustainable food provision. For more information on this topic, refer to section 9.3.
Food	Why are cold meals excluded?	Currently, only hot meals are included in the footprint. Cold meals are excluded to simplify data collection and because reliable emissions factors are not yet available. Future versions of the calculator may include cold meals once appropriate factors and assumptions are developed.

Food	Does Food include drinks?	No. At this stage, drinks are excluded from the footprint calculation. The category title reflects the intended scope, but drinks may be included in future versions as data and emissions factors become available.
Food	What if we don't know our meal numbers?	Where data on meal counts is missing, the calculator applies benchmarks based on averages for the school type. These benchmarks provide reasonable estimates, but schools are encouraged to provide actual meal numbers wherever possible for improved accuracy.
Purchasing	Why don't you ask about second- hand purchases?	Reliable factors for refurbished goods (e.g. ICT, furniture) are limited. The tool may expand to include these in future versions.
Purchasing	Why do you use spend-based data for purchases instead of item-level data?	Spend-based EEIO modelling links expenditure to average environmental impacts across economic sectors. It is practical for schools to report (all schools track spend), whereas item-level or supplier-specific data would be too complex and inconsistent. EEIO methods are widely used in corporate carbon accounting.
Purchasing	Do fluctuations in spend affect my results?	Yes. Because the calculation is based on spend, factors such as inflation, bulk purchasing, or unusual one-off expenses may affect results year-to-year. This is a limitation of the EEIO method, but over time results still give a good indicator of procurement-related impacts.
Purchasing	What if we don't know our exact spend?	If spend data is missing, the calculator applies benchmarks based on average spend per pupil for each school type. These benchmarks ensure that schools

		can still produce a complete footprint, though accuracy is lower than when using actual spend data.
Uniform	Why is uniform excluded from the total footprint?	School uniform emissions are outside the school's operational boundary under the Greenhouse Gas Protocol. Uniform is purchased by households, not by the school itself. To recognise stakeholder interest, the calculator still estimates uniform emissions, but these are reported separately and excluded from the school's total footprint.
Uniform	How are uniform emissions calculated?	Uniform emissions are estimated using average spend assumptions (e.g. ~£243 per pupil at Primary, ~£252 at Secondary, plus sports kit costs), multiplied by DEFRA EEIO emission factors for textiles. This approach is based on averages and external sources such as The Wrong Blazer Report (The Children's Society, 2020), so results are indicative rather than precise.
Uniform	What about second-hand uniform purchases?	The calculator allows schools to record second-hand uniform, but there are currently very few reliable emissions factors available for refurbished or reused clothing. At present, these data are collected for information only. Future versions may introduce appropriate factors or considerations of avoided emissions for second-hand uniform.

#### **A.3. Planned Future Updates**

The carbon calculator is designed to evolve. As new data sources and best practice standards become available, the tool will be refined to ensure optimum accuracy, usability, and relevance for schools. This section outlines the anticipated improvements that will strengthen the calculator, support more reliable reporting, and provide clearer insights for teachers, pupils, and administrators.

Planned Update	Update Justification
Methodology and questions review	A full review of the existing methodology and questions will take place with a view to providing users with more granular data, improving traceability of emissions, and enhancing overall usability. We will consider:  • Where it's possible to expand categories to allow for users to provide more granular data to receive a more detailed footprint report  • Where it's possible to improve data entry to reduce error margins, for example:  • Adding a multiplier field to allow users to more easily calculate mileage for schools trips  • Allowing users to input commuting survey data directly into the tool, to remove the need to calculate percentages manually  • Where we may be able to make questions optional to reduce the data collection burden on users  • Where we can implement 'fallback' methods e.g. allowing users to opt to use an alternative, less precise calculation method but still using their own data, as an alternative to using the built-in averages  • Expanding the reporting categories to include cold food, drinks and snacks, construction, summer clubs

User experience/interface improvements	<ul> <li>The question flow will be more flexible, allowing users to enter data in whatever order they'd like. This will be facilitated by a menu interface which will allow users to enter individual calculator sections e.g. Electricity and answer the corresponding questions. Users will be able to revisit sections as often as they'd like before they submit their data to receive their report.</li> <li>A review section will allow users to review all their data on one page and revisit questions before completing their calculation. This will help to reduce incorrect data entry and improve accuracy.</li> <li>Clearer guidance and tooltips will support a smoother user experience.</li> </ul>	
Improved reporting	<ul> <li>Reporting will be improved to feature more detailed charts and tables and provide footprint per pupil and per m2.</li> <li>Electricity reporting will be expanded to include both location-based and market-based emissions, allowing schools to demonstrate and track the impact of purchasing renewable/ green tariffs.</li> </ul>	
Built-in decarbonisation planner	Functionality for users to build a decarbonisation plan will be built into the tool, allowing users to map actions against their footprint report, track their progress in implementing them, and monitor their impact over time.	
School Group Dashboard	The School Group Dashboard will allow an admin overseeing school groups (for example individuals from MATs, local authorities, faith-groups and sustainability projects) to view and download combined data for schools.	

### **Appendix B - Glossary of Terms**

#### **B.1. Core Carbon Accounting Terms**

To be able to understand and use the *Count Your Carbon* calculator effectively, it is important to be familiar with some key terms. These terms come from standard carbon accounting practices, and they provide the foundation for how emissions are measured, compared, and reduced.

Term	Description
Greenhouse Gases (GHG)	Greenhouse Gases (GHGs), as defined by the "Kyoto Protocol", refer to six specific gases that contribute to climate change due to their ability to trap heat when released into the atmosphere. These gases include Carbon dioxide ( $CO_2$ ), Methane ( $CH_4$ ), Nitrous oxide ( $N_2O$ ), Hydrofluorocarbons (HFCs), Perfluorocarbons (PFCs), and Sulphur hexafluoride ( $SF_6$ ).
Greenhouse Gas Emissions	Greenhouse Gas Emissions are identified as the release of specific gases into the atmosphere that contribute to climate change. They are categorised into two groups; direct emissions which are owned and controlled by an organisation (e.g. consumption of natural gas within boilers) and; indirect emissions which are emitted as a result of activities but are not necessarily owned or controlled by the organisation (e.g. staff and student commuting).
Global Warming Potential (GWP)	Global Warming Potential (GWP) is used to measure the impact of greenhouse gases in a standardised way. It measures how much energy is absorbed by 1 tonne of gas over a 100-year period (relative to CO <sub>2</sub> ).

Carbon Dioxide Equivalent (CO <sub>2</sub> e)	Carbon Dioxide Equivalent ( $CO_2e$ ) is the universal unit of measurement of each of the six greenhouse gases to indicate their global warming potential (GWP). Each of the six greenhouse gases are compared to carbon dioxide ( $CO_2$ ) and expressed as $CO_2e$ to allow a measurement against a common basis. For example, 1 tonne of methane ( $CH_4$ ) has a global warming potential of 28, meaning it traps 28 times more heat than carbon dioxide over a 100-year period. Therefore, 1 tonne of methane = 28 tonnes $CO_2e$ .
Carbon Emissions	Carbon Emissions are the release of carbon dioxide ( $CO_2$ ) into the atmosphere. This typically happens when fossil fuels are burnt which then releases $CO_2$ . For example, fuel used within cars can release this greenhouse gas into the air and over time this can affect the earth's climate.
Scope 1	Scope 1 emissions are from directly combusted fuels. Within a school environment this can include fuel for heating buildings (natural gas, oil, wood, coal) and also for school owned transport (diesel, petrol etc.).
Scope 2	Scope 2 emissions refer to energy purchased from third parties, such as electricity and steam. In a school setting, this typically relates to electricity. Although energy providers determine the type of fuel used to generate the electricity, the organisation remains the end consumer. This can be influenced by switching to a different supplier or opting for a green tariff.
Scope 3	Scope 3 indirect emissions are from the supply chain. These are goods and services which are procured in order to deliver services (upstream). For a school this could include the buying of textbooks, stationery, and food and catering services. It also includes emissions that occur as a result of an organisation (downstream) such as the use of the bought textbooks and stationery but also waste disposal and recycling.

Baseline	Baseline refers to emissions, typically over a 12-month period, that outlines the baseline emissions level before any improvements or changes are made. This allows organisations to measure any future emissions against the baseline to record any changes to greenhouse gases.
Emission Factor	A factor allowing greenhouse gas emissions to be estimated from a unit of available activity data and absolute greenhouse gas emissions.
Activity Data	Emissions derived from activities that take place within an organisation.
Operational Boundary	An Operational Boundary determines the direct and indirect emissions associated with operations owned or controlled by the reporting company.
Organisational Boundary	An Organisational Boundary outlines which parts of a company are counted when measuring its greenhouse gas emissions. It's determined by either the equity share approach, where emissions are reported in line with ownership, or the control approach, which focuses on the operations that an organisation manages directly.
Net Zero	Net Zero refers to the balance between the amount of greenhouse gas produced and the amount of removed from the atmosphere. Net-Zero will be reached when the amount of greenhouse gases added to the atmosphere is no more than the amount taken away from the atmosphere.
Avoided Emissions	Avoided Emissions refer to the reduction of greenhouse gas emissions that would otherwise be released into the atmosphere if not for intervention from sustainable actions and practices.

Embodied Carbon	Embodied Carbon refers to the greenhouse gas emissions generated throughout the lifecycle of building materials from extraction and processing to transport, construction, and eventual demolition. In a school context, this includes emissions linked to sourcing materials for classrooms and removing outdated structures.
Carbon Hotspot	A Carbon Hotspot is where a significant portion of upstream CO <sub>2</sub> emissions occur during the production of goods and services. Identifying these areas helps focus efforts on reducing the overall carbon footprint.
Benchmark	A Benchmark is applied when a school cannot provide specific data for certain activities, an estimation is then used based on information from a small sample of schools, Multi-Academy Trusts (MATs), and Local Authorities. This helps fill gaps and creates a starting point for schools to calculate emissions.
Carbon Neutral	Carbon Neutral is a state where the amount of carbon emissions produced is balanced by removing the same amount from the atmosphere–often through actions like using renewable energy or supporting carbon offset projects.
Carbon/GHG Accounting	Carbon/GHG Accounting is a method employed for measuring and reporting greenhouse gas emissions. It helps organisations track emissions, ensure consistent and transparent reporting, and support reduction strategies and climate goals.
Carbon Footprint	A Carbon Footprint is the total amount of emissions emitted by an organisation across scope 1, 2 & 3.
Carbon Offsetting	Carbon Offsetting means reducing greenhouse gas emissions in one area to make up for emissions produced somewhere else. For example, if an organisation releases carbon emissions from natural gas

	consumption within boilers, they can support projects that reduce emissions elsewhere, like planting trees or investing in clean energy.
Climate Action Plan	A detailed plan to enable your education setting, or trust, to progress or commence sustainability initiatives.
Sustainability Lead	A group of people or an individual responsible for the development and implementation of a climate action plan.
Primary Data	The information submitted directly into Count Your Carbon by schools.

## **B.2. Calculator-Specific Terms**

Terms unique to *Count Your Carbon*.

Term	Description
Count Your Carbon	Count Your Carbon is the nation's first free, full scope carbon emissions tool built for - and in collaboration with - nurseries, schools and colleges. It supports educational settings to calculate, understand, reduce and track carbon emissions.
The Playground	Accessible via the Count Your Carbon dashboard upon completion of a carbon footprint report, The Playground is an educational tool intended to engage students with their school's decarbonisation journey. Using real data from your school's carbon footprint calculation, pupils can tinker and model the carbon impact of different actions across six key areas: fuel, electricity, commuting, water, food, and purchasing. Then, pupils are invited to take part in a vote, the results of which can be used to communicate to school leaders where they think their school should prioritise action.
Energy, Waste, and Water	One of the four sections of questions covered by the calculator. This section includes questions on: fuel, electricity, water, waste.
Transport	One of the four sections of questions covered by the calculator. This section includes questions on: school vehicles, school trips, staff and student commuting.
Food	One of the four sections of questions covered by the calculator. This section includes questions on hot meals.

Purchasing & Uniform	One of the four sections of questions covered by the calculator. This section includes questions on purchasing and uniform.
Data Collection Sheet	The 'Data Collection Sheet is a spreadsheet intended to support you to gather your data in preparation for completing your carbon footprint calculation with Count Your Carbon. This can be downloaded from <a href="https://www.countyourcarbon.org/gathering-your-data/">https://www.countyourcarbon.org/gathering-your-data/</a>
Carbon Footprint Report	Your 'Carbon Footprint Report' is accessible in two forms: in the Count Your Carbon dashboard, and as a PDF. By clicking on 'View/download reports' followed by 'view' on your chosen report, you'll be able to view your in-dashboard report. This provides:
	The total carbon footprint for your setting
	<ul> <li>Your footprint broken down across 11 emissions areas</li> <li>Your footprint over time</li> </ul>
	Clicking 'download your report' from this page will allow you to download a PDF version. This contains the above, alongside further information on the calculator methodology.
Carbon Reduction Guide	The 'Carbon Reduction Guide' is an expertly produced PDF providing guidance on how to produce a decarbonisation/carbon reduction plan for your setting. It contains approximately 65 carbon-cutting actions that you can choose to include within the plan for your setting. This becomes accessible once you have completed your carbon footprint report, and is intended to be used alongside the 'Carbon Action Planner'.
Carbon Action Planner	The 'Carbon Action Planner' is a spreadsheet containing approximately 65 carbon-cutting actions that you can choose to include within a decarbonisation/carbon reduction plan for your setting. It contains the ability to filter and select actions to populate an action plan template. This becomes accessible once

	you have completed your carbon footprint report, and is intended to be used alongside the 'Carbon Reduction Guide'.
Decarbonisation plan/carbon reduction plan	A decarbonisation plan (or carbon reduction plan) is a strategy for reducing a school's carbon emissions.
Count Your Carbon dashboard	The Count Your Carbon dashboard is the interface you see upon logging into Count Your Carbon. It contains functionality to:  • Start/continue a report  • View previous reports  • Access The Playground  • Edit school details  • Switch school (if user is registered to multiple schools)

# **Appendix C - Full Question List from the Calculator**

The full list of calculator questions can be downloaded here:

https://www.countyourcarbon.org/wp-content/uploads/2025/09/Data-collection-sheet-25-26.xlsx