



SPRING
ENVIRONMENTAL

FAME User Manual

User videos supporting document
July 2025

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1. Summarised transcripts

1.1. Introduction

1.1.1. Basic information

- **Tool Overview:** Designed to help archaeology organisations comply with PAS 2080 requirements.
- **Purpose:** Create project-specific carbon footprints (forecast and actual) to analyse performance, set baselines, identify high-carbon activities, set targets, and track carbon reduction progress.
- **Best Usability:** Use Excel 2021 or later on Windows for optimal performance.

1.1.2. Dashboard overview

The dashboard is the main tab where you can view and summarise carbon footprint data.

View Options:

- **Whole company** (within a specified time period)
- **Specific project** (within a specified time period)
- **Client** (carbon footprint of all projects for a specific client within a specified time period)
- **Location** (carbon footprint of all projects for a specific location within a specified time period)

Export Data: Export data as CSV for client reporting.

1.1.3. Colour-coded tabs

The tabs in the tool are colour-coded to help with navigation:

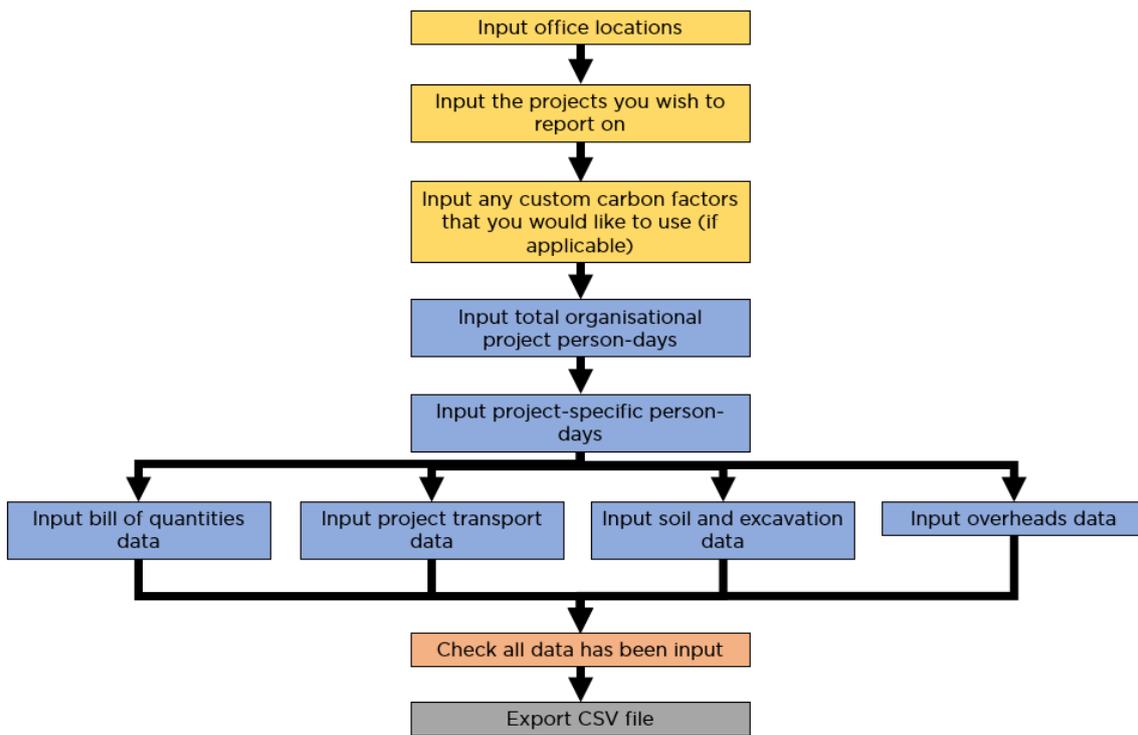
- **Orange Tabs:** Check entered data for a project or time period
- **Blue Tabs:** Regular data input (e.g. monthly or quarterly).
- **Yellow Tabs:** Less frequent updates (office locations, project details, custom carbon factors).
- **Green Tabs:** Contains databases (emission database, overheads database, and carbon factor database).

1.1.4. Order of input

To ensure the tool functions correctly, data must be input in a specific order:

1. **Input Office Locations:** Start by entering office locations.
2. **Add Projects:** Enter only the projects you wish to report on, not all organizational projects.
3. **Custom Carbon Factors (if applicable):** If using supplier-specific data for custom carbon factors, input these before proceeding.

4. **Input Person-Days:** Begin with total organisational person-days, then project-specific person-days (order is critical for proper allocation).
5. **Input Remaining Data:** Enter data for bill of quantities, project transport, soil/excavation, and overheads, and update regularly.
6. **Verify and Export:** Use the data input check tab to ensure completeness before exporting the CSV via the dashboard.



1.1.5. Key themes in the tool

1. Forecast vs. Actual Data:

- **Forecast Data:** Used to calculate projected baselines.
- **Actual Data:** Tracks carbon emissions to date.
- **Unit Flexibility:** The units for forecast data do not need to match the units for actual data. For example, an initial forecast might use vehicle miles but later updated with actual fuel consumption data from telematics systems.

2. Development Emissions:

- **Archaeological vs. Development Emissions:** Distinguishes between purely archaeological activities and development-related activities.
- **Archaeological Emissions:** Archaeology-specific emissions are defined as those that are purely required for archaeological activity. This includes travel to the project site, hire of equipment, purchase of fuels, and activity specifically related to the task.

- **Development Emissions:** Development emissions are defined as those which interact with archaeological activities but could either be reported by another entity or would have otherwise occurred.
 - **Definitions:** Definitions are available in the **Soil and Excavation** input tab.
3. **Data Resolution and Quality:**
- **Preferred Data:** Physical activity factors provide the most accurate footprint calculations.
 - **Flexible Options:** If physical activity data is unavailable, the tool offers other data resolution options, with guidance in the methodology document.
 - **Traffic Light System:**
 - **Green:** Preferred, most accurate data.
 - **Amber:** Acceptable, less precise data.
 - **Red:** Least accurate, should be avoided.
 - **Multiple Formats:** If entering data in multiple formats, the tool will flag potential double-counting or discrepancies. Avoid entering the same data in multiple formats unless they represent separate activities.
 - **Improvement Over Time:** As data collection improves, aim to provide higher-resolution data.

1.1.6. Example carbon footprint overview

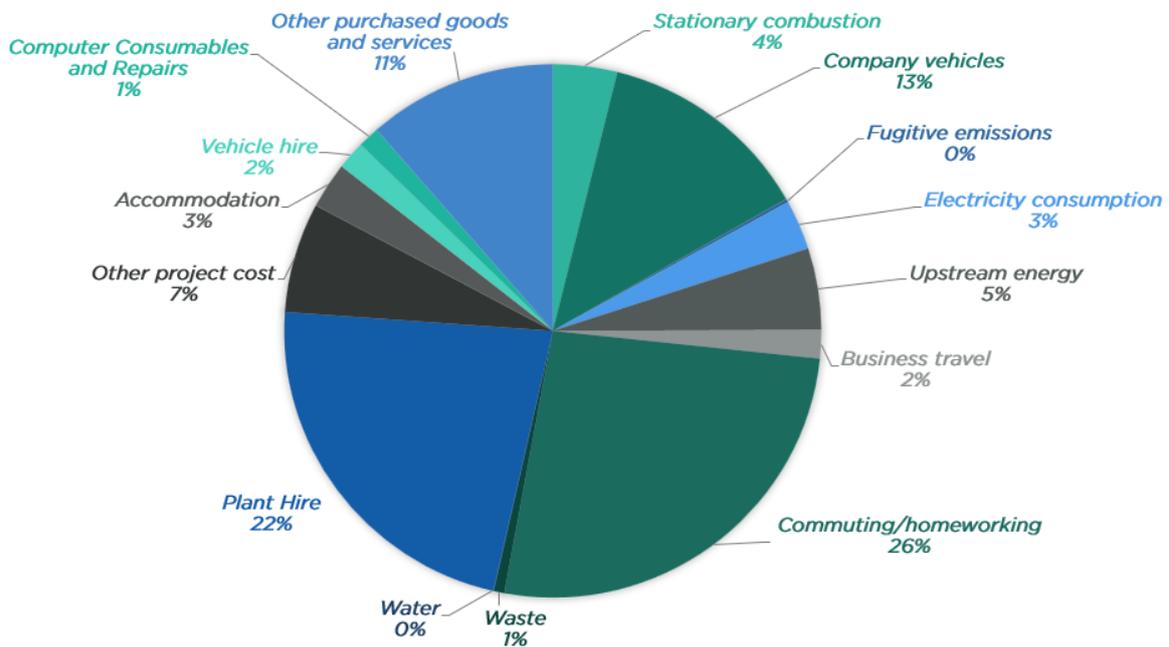


Figure 1 Typical carbon footprint for an archaeology organisation

Typical Footprint for Archaeology Organisations:

- **Major Contributors:**
 - Goods and services purchased by archaeology companies, including; plant hire, project costs, accommodation, vehicle hire, and computer consumables.
 - Commuting/homeworking
 - Company vehicles
- **Split into two main categories:**
 - **Project Activities:** Includes fuel consumed by plant equipment and transport to and from project sites.
 - **Overheads:** Includes office electricity, heating, and commuting. These overheads must be included in the footprint calculation to avoid missing a large portion of the company's carbon footprint.

Allocation Methodology: The tool requires input for both project-specific activities and overheads.

Overhead emissions are allocated between projects, discussed further in the person-days input video.

1.2. Data entry, data quality and error management

1.2.1. General process of adding data

1. **Inputting Basic Data:** To begin, users must input the basic data required for the tool to function correctly. This includes:
 - Your name
 - A project code (If the project for which data is being entered is not visible in the dropdown, the user can add a new project via the **Project input** tab.)
 - Record type (whether it's forecast or actual)
 - Start and end dates
 - Optional: Additional notes

It's important to ensure that these fields are filled in accurately, as missing data will cause errors in the tool. For example, if no project code is entered, an error will appear.

2. **Data Quality Checks:** The tool includes built-in checks to prevent common errors. For instance, if the user enters an invalid value (e.g. alphabetic characters in a field that requires a numeric input), the tool will display a warning. These checks are designed to help prevent runtime errors, which can cause incomplete or incorrect calculations.
3. **Project-Specific Data:** The tool ensures that data is entered only within the correct project dates. For example, if a project starts on January 1, 2024, and ends on June 1, 2025, data outside of this date range will be flagged as an error. If the project end date changes, the user will need to update the project input before entering new data.
4. **Forecast Data Handling:** When entering forecast data, the corresponding fields for start and end dates will automatically fill in based on the project's predefined dates. The tool will not allow editing these fields and the cells turn dark grey, indicating that no user input is allowed.

1.2.2. Handling runtime errors

A runtime error occurs when the macro cannot complete a process, potentially leading to incorrect or incomplete data in the tool.

1. **Resetting Runtime Errors:**

- When a runtime error occurs, the user should click the **runtime error reset** button. This action clears any partially entered data and allows the user to attempt the data input process again.
- After attempting to resubmit the data, if the problem persists, it's suggested that the user reach out for support, by contacting info@spring-enviro.co.uk.

2. **Live Data:** Only data marked as "live" will appear in the dashboard or be exported into the CSV. "failed" data indicates an error during the input process, "amended" data indicates a data entry that has been recalled and adjusted, while "master" refers to records specific to overhead data, that have been split into monthly resolution. "live" entries are the only ones that are considered valid for analysis.

3. **Example of Input Process:**

- After data is input and added successfully, users can navigate to the emissions database, where the data will appear as "live" and be available for reporting.
- If there was a runtime error when entering the data and you have used the runtime error reset, the entry will appear as "failed".

1.2.3. Recalling and amending data

If a user discovers that they've made a mistake while entering data (for instance, entering incorrect units or dates), the **recall function** allows them to amend existing records.

Recall Process:

- To recall data, the user must locate the record in the emissions database and determine which tab the record was originally entered from (e.g. Bill of Quantities).
- The tool ensures that data can only be amended if it's marked as "live." If the data is marked "failed" or "amended," it cannot be edited.

Steps to Recall:

- The user identifies the record number they wish to amend and the category (tab) from which it was originally entered.
- The user will input a reason for the amendment and make the necessary changes to the data.

- After amending, the user clicks "Add" to save the updated record.

Data Quality Checks for Amending Data:

- If the user attempts to recall a record that has already been amended or cancelled, they will receive a warning indicating that only live data can be amended.
- Additionally, the tool prevents users from recalling data into an incorrect category. For example, attempting to recall transport data into a **Bill of Quantities** tab will not work.

Overheads Recall:

When recalling overheads data, users need to ensure they are recalling from the **Overheads db** (indicated by an "OH" prefix). Additionally, if the data entry has been split into multiple records, users need to ensure they are recalling the "master" record (indicated by a "-M" suffix).

1.3. Office input

The first step when receiving the tool is to input your organisation's basic data, such as office locations, by navigating to the **Office input** tab. This data is considered "irregular inputs," represented by yellow tabs in the tool.

1.3.1. Data input

1. Name and Office Information:

- Input your name, the office name, and address.

2. Office Area:

- Must be numerical (e.g. in m²) — no text like "100 square feet."
- Used for estimating utility consumption if actual utility bills are unavailable.

3. Operational Control:

- Select from dropdown options:
 - Directly metered and billed.
 - Utilities included in rent.
- This helps the tool allocate emissions to the correct GHG Protocol category

4. Energy Usage:

- Options: "Electricity and Fossil Fuels" or "All Electric."
- Determines valid inputs for energy data and helps with estimations.

5. Renewable Electricity:

- Answer yes or no.

6. Building Type:

- Choose the type of building from a dropdown (e.g. office, retail).

- Used for estimating energy consumption using industry benchmarks.
- If your building function is not listed in the dropdown, contact info@spring-enviro.co.uk.

7. Number of Employees:

- Must be numerical.
- Used to estimate commuting and homeworking emissions.

8. Notes:

- Free-text field for additional context (e.g. "Moved in 2005").

1.4. Project input

This section is for entering projects you want to include in carbon footprint reporting. Only input the projects you wish to report on, not necessarily all organisational projects.

1.4.1. Data input

1. Name and Unique Project Code:

- Input your name.
- Enter a unique project code (each project must have a distinct code).
- The tool will reject duplicate project codes, if you try to re-enter a project code already in the database, an error will occur.

2. Project Name and Client:

- Provide the project name.
- Enter the client name as free text or select from the dropdown (the dropdown is updated automatically as new clients are added).

3. **Location:**
 - Input a location manually or select from a dropdown of predefined counties.
4. **Project Manager and Scope:**
 - Specify the project manager.
 - Use tick boxes to define the project scope.
5. **Additional Commentary:**
 - Add notes if needed (optional).
6. **Project Dates**
 - Input the project's expected start and end dates in the given format.
 - If project timelines change (e.g. delays), you can recall the project and amend these dates later.

Once input, the project details will appear in the database. New clients and locations are automatically added to their respective dropdowns for future use.

1.5. Person-days input

Once a project has been input into the database, the next step is to navigate to the **Person Days Input** tab. As highlighted in the introduction video, a significant proportion of an archaeology company's projected emissions typically comes from overhead emissions (e.g. office electricity or staff commuting). Since these activities contribute to project delivery, the tool allocates these emissions proportionally across projects based on **full-time equivalent (FTE) person days**.

1.5.1. Allocation methodology

The allocation methodology works as follows:

1. The tool calculates overhead emissions per person day using total company person days.
2. These emissions are then allocated to projects proportionally, based on the FTE person days worked on each project relative to the total FTE person days across the organisation.
3. For example, if 50% of the total company FTE person days for projects in January were spent on Project A, 50% of the overhead emissions for that month would be allocated to Project A. Any remaining emissions would be attributed to other projects (either within the tool or not in the tool).

1.5.2. Key considerations

- **Non-project staff (e.g. HR, finance, IT)** should not be included in the total company person days, as their work does not directly contribute to project delivery. Including them could result in less than 100% of the emissions being distributed, even if all projects are reported in the tool.
- Both **actual** and **forecasted person days** must be input for total company and project-specific person days.

1.5.3. Data input

To ensure accuracy, follow this strict process for entering person days:

1. Enter Total Company Person Days

Start by inputting the total company person days for all project staff. This figure includes both projects reported in the tool and those not reported. For instance, if 100 total person days were worked across the organisation in January, this figure must be entered first.

Note: The tool will not allow project-specific person days to be entered unless total company person days for the same period have already been input.

2. Enter Project-Specific Person Days

Once total company person days are recorded, you can proceed to input the person days worked on specific projects reported in the tool.

Note: The sum of project-specific person days cannot exceed the total company person days for a given month.

1.5.4. Example workflow

1. Input Total Company Person Days:

- Enter the year (4-digit format) and select the month from the dropdown.
- Input the total company person days as a numeric value.
- Example: For January 2024, input 100 total company person days.

2. Input Project-Specific Person Days:

- Select the project from the dropdown (which will only include projects entered in the “Project input” tab – if the project does not appear, navigate to the **Project input** tab and input the project you would like to report on).
- Enter the month, year, and the numeric value for project-specific person days.
- Example: For January 2024, input 50 person days for Project A.
- Allocation: Since 50 out of 100 total person days were worked on Project A, 50% of overhead emissions for January 2024 will be allocated to this project.

1.5.5. Error handling

The **Person days input** tab will typically throw errors in the following situations:

- If you attempt to input project-specific person days without corresponding total company person days
- If the sum of project-specific person days exceeds the total company person days for a month (e.g. 80 days for Project A and 50 days for Project B, when only 100 total company person days were input)

1.6. Bill of quantities input

The Bill of Quantities has been set up to align with the costing spreadsheet constructed by FAME. This was done to reduce the time required to fill in this tab. The Bill of Quantities covers data for goods, products, and services used throughout a project's lifetime and is split into 8 sections:

- Preliminaries
- Excavation and Investigation
- Processing of Recovered Material
- Post-Excavation Assessment
- Post-Excavation Analysis and Dissemination
- Public Engagement
- Deposition
- **Plant Hire (New Category):** Highlighted as a significant emissions contributor, separated for focus and positioned prominently on the input page.

1.6.1. Core vs. optional activities

The FAME Bill of Quantities includes an extensive list of inputs, some of which contribute little to the total carbon footprint. To streamline data entry, activities have been separated into *core* and *optional* categories:

- **Core activities:** Data for these activities *must* be input for each project, both forecast and actual.
- **Optional activities:** While not required, these activities provide a fuller and more representative project footprint. They are typically low-carbon intensity categories that are less significant overall.

The input process for both core and optional activities is similar, so we will only demonstrate one.

1.6.2. Data quality options

As mentioned in the introduction video, the Bill of Quantities provides several data quality options, with a preference for the *best data quality* input:

Physical Units vs. Monetary Spend:

- Physical units (e.g., litres of fuel, tonnes of material) are preferred over monetary spend.
- Monetary data relies on Exiobase, an industry-standard database with broad reporting categories. This approach makes it harder to reflect carbon reduction activities, as emissions are tied to spending.
- Categories that allow for physical unit inputs have been highlighted in blue. Use the dropdown to select either physical units or £ spent.

1.6.3. Plant hire, temporary site accommodation, and excavators

There are three main categories where diesel is used in plant hire:

- Temporary site accommodation
- Excavation
- Other plant and equipment

Plant hire and temporary site accommodation emissions

- **Option 1:** Physical fuel consumption. If you know the fuel consumed (preferably in litres of diesel or biodiesel, otherwise in £ spent on fuel), input this here.
- **Option 2:** £ spent on plant hire including the fuel (if fuel costs cannot be separated from the total plant hire cost).

Note that:

- Option 1 uses average diesel prices for the reporting period.
- Option 2 uses Exiobase spend-based factors.

Excavator Emissions

Excavator emissions are included in the **Soil and Excavation Input** tab. Estimations performed in this tab provide a more accurate result than the Exiobase spend-based factors used in the Bill of Quantities.

Summary

1. **Preferred Unit:** Litres of diesel/biodiesel. If litres of fuel cover all three categories, ensure this data is not entered again into Temporary Site Accommodation or the Soil Excavation tab.
2. **£ Spent on Fuel:** If litres are unavailable, input £ spent on fuel.

3. **Total Spend:** If fuel costs cannot be separated from service costs, but excavator costs can be separated from welfare units and other plant hire; input the total spend for welfare units and other plant in the BoQ tab. For excavators, input data into the **Soil and excavation input** tab.
4. If excavator spend cannot be separated from welfare units and other plant, input the total spend in the BoQ tab and omit data from the **Soil and excavation input** tab.

1.6.4. Office-based activities

Some activities in the Bill of Quantities are required for *costing* but not for *carbon accounting*, particularly those performed at an organisation's offices. Including these would result in double-counting because emissions for office-based activities are already accounted for in the **Overheads input** tab.

Activities that could introduce double-counting are marked with an asterisk (*) on the BoQ input tab. Only input data for externally contracted activities not performed by your organisation's staff.

1.6.5. Data input

1. **General Info:** Input name, project code, record type, and dates.
2. **Unit:** Select unit from the dropdown where available (if highlighted blue then a physical unit can be used, otherwise spend must be input)
3. **Quantity input:** Differentiate between **Archaeological Activity** and **Development Activity**. Must be a numeric entry.

4. **Custom carbon factor:** If applicable, select the custom carbon factor from the dropdown. If the custom carbon factor does not appear in the dropdown, navigate to the **Custom carbon factor input** tab and input the factor you would like to use.
5. **Recalling data:** It is possible to recall multiple records on the bill of quantities. When recalling multiple records, ensure the start date, end date, record type, and project are consistent across all records.

1.7. Project transport input

The project transport tab is split into two sections:

1. **Company-owned and operated vehicles and greyfleet:** Company owned and operated vehicles refer to the company fleet, and greyfleet is when employees use their personal vehicles for business purposes and are typically expensed at 45p/mile.
2. **Project-Related Business Travel:** Covers transport in third-party vehicles (e.g. train, bus, flights).

1.7.1. Overheads vs. project transport

It is essential to differentiate between **project-related transport** and **overheads transport**:

- **Project-Related Transport:** Transport directly linked to a project, such as travel to and from a project site.
- **Overheads Transport:** Transport that is not directly tied to a specific project. Examples include travel to a FAME conference or other general business-related trips.

Any transport categorized as overheads should be input into the **Overheads input** tab. This overhead transport will then be allocated based on the person-day allocation methodology. To avoid double counting, ensure you input project-related transport in the **Project transport Liq Fuels input** tab and overhead transport in the **Overheads input** tab.

1.7.2. Electric vehicles (EVs)

Only input roadside charging data (not office charging, which will be included in the office's electricity consumption and input on the **Overheads input** tab). Preferably input data as kWh consumed; if unavailable, use mileage, then cost as a last resort.

1.7.3. Data quality options

As seen across other tabs, we use a **data preference hierarchy** to prioritize the best-quality data:

- **Option 1:** Green (most preferred)
- **Option 2:** Amber (if Option 1 is unavailable)
- **Option 3:** Red (worst case scenario)

A **flowchart** is provided to the right of the input tables to help determine the appropriate data resolution you can provide.

Data duplication must be avoided to maintain accuracy:

- If you input **litres of fuel**, do *not* also input mileage.
- If you input **distance travelled** by third-party vehicles e.g. rail, do *not* also input the associated cost.

The tool is designed to flag any duplication attempts to ensure that data represents *distinct activities*. If distance and cost data is input into business travel, only the distance data will be processed.

1.7.4. Data input

1. **General Info:** Input name, project code, record type, and dates.
2. **Company-owned and operated vehicles and greyfleet**
 - **Company Fleet:** Data can be input as litres of fuel consumed, miles/kilometres travelled, or costs. However, input only one format per record.
 - **Greyfleet (when employees use their personal vehicles for business purposes):** Data can be input based on:
 - Fuel consumed
 - Mileage or kilometres by vehicle type, size, and fuel type.
 - Combined mileage or kilometres of all vehicles
 - Vehicle sizes are defined based on DESNZ guidelines (e.g. small, medium, large cars), and definitions are shown in the table to the right.
3. **Project-Related Business Travel**
 - Input either distance or cost—but not both in the same record.
 - If both data points are available but represent different activities, input them as separate lines.

1.8. Soil and excavation input

The **Soil Excavation Input Tab** is divided into two sections:

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1. **Soil Emissions:** Tracks biogenic emissions from soil disturbance, which are currently out of scope under the Greenhouse Gas Protocol but may be included in future reporting.
2. **Excavation Input:** Calculates emissions from excavators and related equipment during excavation activities, primarily based on fuel consumption.

1.8.1. Soil emissions

For **organic soils or peat**, there is an option to input the **number of months** that the soil has been removed for, if it has been reinstated:

- When **organic soils (peat)** are removed and reinstated below the water table, carbon loss to the atmosphere can be quickly stopped.
- The tool uses the number of months between removal and reinstatement to calculate the emissions.

Note: For **non-organic soils**, the carbon loss is more difficult to mitigate. Therefore, there is no option to input the months of removal for non-organic soils.

1.8.2. Excavator emissions

As highlighted in the **Bill of Quantities (BoQ)** video, there is a risk of **double counting** emissions in this section:

- If litres of diesel for excavation equipment have already been input into the **BoQ input** tab, you should not fill in this section again.
- If you only have monetary spend for excavators and plant equipment (and you can separate the costs), you should:
 1. Input the amount spent on plant equipment in the **BoQ input** tab.
 2. Use the **Soil and excavation input** tab to input specific data for excavators, as it provides a more accurate estimate of emissions.
- If you only have monetary spend for excavators and plant equipment (and you cannot separate the costs), you should:
 1. Input the amount spent on **plant equipment and excavators** in the **BoQ tab**.
 2. Input no data into the **Soil and excavation input** tab.

1.8.3. Data input

1. **General Info:** Input name, project code, record type, and dates.
2. **Soil Inputs [definitions of dropdowns provided to the right of the input tables]:**
 - Select **Country** and **Former Land Use** from dropdowns.

- Specify **Soil Type** and, if applicable, the number of months peat will be stored before reinstatement (for organic soils).
- Differentiate between **Archaeological Activity** and **Development Purposes**.
- Input soil disturbance area and depth (<30 cm or ≥30 cm) in appropriate units.

3. Excavator Inputs:

- Select **Excavator type** from the dropdown
- Choose units (e.g. meters cubed of soil moved or hours of operation).
- Differentiate between **Archaeological Activity** and **Development Purposes**.

1.9. Overheads input

Overheads include non-project-specific activities like electricity, natural gas, commuting, non-project-related business travel, waste, water, and fugitive emissions.

1.9.1. The 1% rule for overheads

In **environmental lifecycle assessments**, the concept of a “*cut-off*” is used to exclude minimal contributors to the carbon footprint. This methodology uses the **1% rule**, meaning processes contributing less than 1% of the total footprint can be excluded. The **1% rule** is based on corporate carbon footprints from two **FAME members**.

- As a result, the **tool** only requires data for the following overhead categories:
 - **Buildings**: Electricity and fossil fuel consumption
 - **Commuting and homeworking**
 - **Overhead business travel**

1.9.2. Data allocation

Overhead emissions are allocated to projects based on person-days. If person-days data is missing, overhead emissions won't be included in project calculations. Ensuring complete and accurate person-days data is crucial.

1.9.3. Data quality options

For overheads, we use a **data preference hierarchy** to prioritize the best-quality data:

- **Option 1:** Green (most preferred)
- **Option 2:** Amber (if Option 1 is unavailable)
- **Option 3:** Red (worst case scenario)

A **flowchart** is provided to the right of the input tables to help determine the appropriate data resolution you can provide.

- Enter data once and avoid duplicate formats.
- The tool will flag potential duplicates, allowing users to confirm or resolve conflicts.

1.9.4. Monthly data resolution

All overhead data must be input at monthly resolution. This aligns with the monthly person-days input and ensures the allocation methodology functions correctly.

You do not need to input each month individually. For example, if you input annual data, the tool will automatically split it into 12 monthly entries.

In the Overheads Database:

- The master entry will be indicated by a “-M” and have a status of “master”.
- The corresponding monthly split entries will appear below as “live” entries.

1.9.5. Data input

1. General Information:

- Enter your name and select whether the data is **Forecast** or **Actual**.
- Overheads data can only be input for whole months, so you must enter the start and end dates in the format MMM-YY (e.g. Jan-24).

2. Buildings:

- Follow the flow chart for data input:
 - Option A: Measured carbon footprint.
 - Option B: Meter readings for electricity and gas.
 - Option C: Tool-generated estimate based on office size and benchmarks (as in the Office database in the “Office input” tab).
- **Locational vs. Market-Based:**
 - A market-based footprint adjusts for renewable energy purchases. You can indicate whether an office purchases renewable electricity in the **Office input** tab.
- Natural gas entries for all-electric offices will trigger an error. You can indicate what energy an office purchases in the **Office input** tab.

3. Commuting:

- Input measured data for commuting and homeworking or request an estimate.
- Estimates are based on UK statistics, employee work-from-home frequency (0-7 days/week), and number of employees. You can indicate the number of employees at each office in the **Office input** tab.

4. Business Travel:

- Input measured carbon footprints or detailed transport data.
- If entering both cost and distance, only distance is used for calculations.

1.9.6. Databases

Once the data is input, it will appear in two databases:

1. **Emissions Database:** Displays calculated emissions.
2. **Overheads Database:** Displays the raw data.

In the **Overheads Database:** Record numbers will have an **“OH” prefix** to identify them as overhead entries.

In the **Emissions Database:** the **overhead record column** links back to the relevant raw data record in the **Overheads Database.**

1.10. Custom carbon factor input

As organisations progress in managing their carbon footprint, improving the accuracy of their carbon calculations becomes increasingly important. One effective method for enhancing accuracy is integrating **supplier-specific data** into carbon footprint calculations. This approach not only creates a more accurate representation of a company's carbon impact but also allows decarbonization efforts within the supply chain to be reflected year over year.

Relying on **Exiobase carbon factors** (monetary-based factors) can be limiting. These factors are linked to monetary activities (e.g. spending money), and reducing a carbon footprint would only occur if a company spends less money. This also does not allow for incorporating any carbon reductions made by choosing suppliers with smaller carbon footprints. If organisations only use monetary data, any decision to choose suppliers based on their carbon impact won't be reflected in their overall corporate carbon footprint.

Creating **custom carbon factors** tailored to a company's specific supply chain is a valuable way to improve the accuracy of carbon footprint calculations. It allows for a clearer reflection of **decarbonisation efforts** and ensures that carbon reductions from supply chain decisions are properly accounted for.

1.10.1. Carbon factor boundaries

When inputting a custom carbon factor, it's crucial to ensure that it has the same boundaries and completeness as the carbon factor it is replacing. For instance, if replacing an Exiobase monetary factor, the new custom factor must include the same categories of data to ensure consistency in the carbon footprint calculation.

1.10.2. Data input

1. **Name and Carbon factor descriptions:**
 - Input your name.
 - Enter a unique short description that will allow you to identify the factor being input
 - Input a longer description with more detail
2. **Custom carbon factor value:**
 - Numeric input for carbon factor value in kgCO₂e
 - Enter the units
3. **Year:** Integer value
4. **Additional Commentary:**
 - Add notes if needed (optional).

1.10.3. Using custom carbon factors in calculations

To use the custom carbon factor in carbon footprint calculations:

1. **Navigate to the BoQ tab:** The custom carbon factor can be applied to any row in the BoQ input table
2. **Input and Custom Factor Selection:** In the BoQ input table, users will see a "**Custom Carbon Factor Applicable**" column where they can select the custom carbon factor that they wish to use.
3. **Recording and Database Update:** After applying the custom carbon factor, the tool ensures that the custom carbon factor is used for the carbon footprint calculations.

1.11. Data input check

The **Data Input Check** tab provides an overview of what data has been entered and what is still missing, helping users identify incomplete records. However, it's important to note that the **Data input check** only offers an **indicative check**. It shouldn't be fully relied upon, as it might show that all data has been entered when it hasn't been.

If the tool shows green, it doesn't guarantee that all required data has been entered. It is only a visual cue. For example, if only a partial record (e.g. from January 1st to January 10th) is entered for transport, the tool will mark the entire month as complete, even though two-thirds of the month is missing.

If any incomplete data is found when exporting a CSV, an alert will prompt you to confirm that you've entered all necessary data, as missing data can distort the carbon footprint calculations.

1.11.1. Using the Data Input Check

To use the Data Input Check tool, you can select either a **project** or a **time period** for checking the data:

1. **Project View:** For example, the tool can check what data has been input for Project A between **January 2024 and June 2025**.
2. **Time Period View:** The tool can also check for a broader time period (e.g. the **2024 calendar year**)

1.12. Input Data Review

The **Input Data Review** tab provides an overview of all the individual types of data input at an aggregate level. For example, if electricity data has been input in kWh for the months of January, February and March, running the macro will return the sum of electricity consumption for the January to March period. The idea is to make the administration of large projects, which may cover many months, easier to reconcile the input data with other project documentation (e.g. profit and loss statements).

The table will show all of the unique data types in the database covering all of the permutation of data input sheet (BOQ core etc.), the input type and the unit. To avoid summing different units, if there is an input for a particular input (e.g. Diesel consumption in BOQ) which has records in the database for both spend (£ unit) and litres, these will be returned as separate line items.

The **Input Data Review** report will only report data directly related to the project being reviewed. It will not return data for overheads.

1.12.1. Using the Input Data Review

To use the Input Data Review tool, please select the project you are interested in and press the “Go” button.

1.13. Dashboard

1.13.1. Overview

The dashboard provides a comprehensive summary of carbon emissions data for all inputted projects, displayed in four distinct formats:

1. **Overall Carbon Footprint:**
 - Shows emissions from all overheads and projects within a specified date range.
2. **Project-Specific Carbon Footprint:**
 - Displays emissions for a selected project, within a specified date range.
3. **Client Carbon Footprint:**
 - Summarises emissions from all projects related to a specific client within a specified date range.
4. **Locational Carbon Footprint:**
 - Captures emissions from all projects within a particular location within a specified date range.

1.13.2. Key features

- **Market-Based vs. Locational-Based Footprint:**
 - **Market-Based Footprint** reflects renewable electricity usage in your organisation, reducing electricity emissions if renewable sources are used.
 - **Locational-Based Footprint** uses government-published emission factors for electricity consumption, regardless of renewable energy purchases.
- **Emissions Breakdown (Scopes 1, 2, and 3)**
 - **Scope 1:** Emissions from owned or controlled sources (e.g. stationary combustion and mobile combustion from project transport).
 - **Scope 2:** Emissions from purchased electricity or energy (e.g. electricity used in buildings or electric vehicles).
 - **Scope 3:** Indirect emissions across the value chain, including categories like business travel, commuting, and upstream impacts from energy production.
- **Scope 3 categories**
 - **Upstream Leased Assets:** Emissions from energy use when you lease assets but lack operational control.
 - **Business Travel:** Emissions from transport in third-party vehicles (e.g. trains, flights).
 - **Project Transport:** Emissions from greyfleet or business travel when undertaken for project specific activities.

- **Commuting:** Emissions from staff travel to and from the office, and includes homeworking.
- **Upstream Impacts:** Emissions from the production and distribution of energy used in both overheads and projects.
- **Development Emissions:** Emissions from activities that interact with archaeological activities but could either be reported by another entity or would have otherwise occurred.
- **Biogenic Emissions:** Emissions from soil disturbance or biomass burning.
- **Forecast vs. Actual**
 - Compare forecast emissions with actual emissions to monitor project-specific carbon reduction efforts.

1.14. Exporting CSVs

1.14.1. Exporting CSV process

1. **Action:** Select "Export CSV" and choose the target folder.
2. **Error Check:** A prompt will warn you if the data for the reporting period is incomplete (e.g. missing or incomplete entries).

1.14.2. CSV structure

The file name includes the date and time of export, the period that you wish to export and the project/client/location name if applicable

The file will contain two sheets:

- **Front Sheet:** Provides a summary and explanation of the data.
- **Summary:** Displays summarised emissions data, mirroring the dashboard.
- **Simple Emissions Data:** Simplified list of all individual entries; only including in-scope, biogenic, and development emissions.
- **Emissions Data:** Displays the emissions data for the selected period (e.g. 2024), with various columns for CO2e emissions. This is a filtered version of the **Emissions db**

There will be additional columns, for example, "percentage of record within chosen reporting period," which helps allocate partial emissions if the data spans across reporting periods (e.g. a record that begins mid-year). Additional columns are explained on the **Front Sheet**.

Only the emissions that overlap with the reporting period and the project timescale (where relevant) are included.

Example: A record from 01/01/24 to 31/12/24 would be fully included in a 2024 calendar year report, while a record from 01/01/24 to 01/06/25, would allocate only 70% of emissions to the 2024 period.

2. Appendix 1: Adjustments to the tool

Since making the user videos, some adjustments have been made to improve usability:

- Data marker column in the emissions database has been moved to one of the first columns in the table
- Description of Y0, Y1, and Y2 on **Core BoQ input** tab adjusted to help users ensure that data for separate activities isn't input multiple times
- Greyfleet description has been moved out of the title on the **Project transport input** tab
- Added the flow chart from the methodology document to the **Soil and excavation input** tab to help users with excavator, plant hire, and temporary site accommodation input
- Included grey cell highlighting for business travel if no further detail needs to be provided. In both **Proj transport Liq Fuel input** and **Overheads input** tab.



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ABOUT US

Spring Environmental is an environmental and sustainability consultancy that can provide support to an organisation or an individual project from concept to delivery

Our team can deliver work covering sustainability strategy, lifecycle assessment, environmental permitting, environmental impact assessment, ISO standard development and energy reduction projects

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